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UNIV. OF MICH.

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CALENDAR

OF THE

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UNIVERSITY OF MICHIGAN



1896-97

ANN ARBOR, MICH.
PUBLISHED BY THE UNIVERSITY
1897

THE COURIER OFFICE,
PRINTERS AND BINDERS,
ANN ARBOR, MICH.

CONTENTS.

	PAGE.
ANNOUNCEMENTS FOR 1897-98	6
CALENDAR	7
BOARD OF REGENTS	8
MEMBERS OF THE FACULTIES AND OTHER OFFICERS	9
UNIVERSITY OF MICHIGAN	20
The University and the State	20
Organization of the University	20
The Libraries	21
The Astronomical Observatory	22
The Museums	23
The Laboratories	27
The Hospitals	31
Aids to Moral and Religious Culture	31
Facilities for Physical Culture	32
Oratorical Associations	33
University Organizations	35
Relation of Students to Civil Authorities	35
Fees and Expenses	36
DEPARTMENT OF LITERATURE, SCIENCE, AND THE ARTS	38
Admission of Undergraduates	38
Admission of Candidates for a Degree on Examination:	
Group I	39
Group II	42
Group III	43
Group IV	44
Admission to Advanced Standing	45
Admission of Students not Candidates for a Degree	46
Times of Examinations	47
Admission on Diploma	48
Courses of Instruction	53
Courses in Professional Study	98
Combined Course in Collegiate and Medical Studies	99
Combined Course in Collegiate and Law Studies	101
Requirements for Graduation	102
Graduation on the Credit System	102
Graduation on the University System	105

Teacher's Diploma and Teacher's Certificate	107
Fellowships and Scholarships	108
Rules and Regulations of the Department	110
Fees and Expenses	113
GRADUATE SCHOOL	114
Admission and Registration	114
Course of Instruction	115
Requirements for Graduation	116
Fees and Expenses	118
DEPARTMENT OF ENGINEERING	119
Requirements for Admission	120
The Work of the Department	126
Facilities for Instruction	131
The Engineering Society	133
Courses of Instruction	133
Requirements for Graduation	142
Fees and Expenses	145
DEPARTMENT OF MEDICINE AND SURGERY	147
Requirements for Admission	147
Course of Instruction	149
Requirements for Graduation	153
Graduate Courses	153
Facilities for Instruction	154
The University Hospital	160
Text-Books and Books of Reference	161
Fees and Expenses	162
DEPARTMENT OF LAW	163
Directions to Applicants for Admission	164
Requirements for Admission	164
Course of Instruction	167
The Graduate Course	172
Requirements for Graduation	173
Libraries	173
Work in the Department of Literature, Science, and the Arts	174
Fees and Expenses	176
Summer School of Law	176
SCHOOL OF PHARMACY	179
Requirements for Admission	180
Courses of Instruction	183
Succession of Studies	189
Requirements for Graduation	191
Stearns Fellowship	192
Library, Books of Reference, and Text-Books	192

Fees and Expenses	193
HOMŒOPATHIC MEDICAL COLLEGE	194
Requirements for Admission	194
Course of Instruction	196
Requirements for Graduation	201
Facilities for Instruction	201
The University Hospital, Homœopathic	202
Fees and Expenses	203
COLLEGE OF DENTAL SURGERY	205
Requirements for Admission	205
Assignment of Seats	207
Course of Instruction	207
Requirements for Graduation	211
Graduate Course	212
Facilities for Instruction	213
Text-Books and Books of Reference	214
Fees and Expenses	515
SUMMER SCHOOL IN THE DEPARTMENT OF LITERATURE, SCIENCE,	
AND THE ARTS	217
General Regulations	217
Courses of Instruction	218
LIST OF GRADUATES OF 1896	223
FACULTIES AND STUDENTS	236
Department of Literature, Science, and the Arts	236
Department of Engineering	272
Department of Medicine and Surgery	281
Department of Law	295
School of Pharmacy	311
Homœopathic Medical College	314
College of Dental Surgery	317
Summer Schools of 1896	323
SUMMARY OF STUDENTS	329
SUMMARY BY STATES AND BY DEPARTMENTS	331
OFFICERS OF ALUMNI ASSOCIATIONS	333
BOARD OF CONTROL OF ATHLETICS	335
GENERAL INDEX	336

ANNOUNCEMENTS FOR 1897-98.

- 1897.
- Jan. 5. University Exercises resumed after Holiday Vacation.
(Evening.) FIRST SEMESTER CLOSES.
- Feb. 19. SECOND SEMESTER BEGINS.
- Feb. 22. (Evening.) Recess begins, ending April 26 (evening).
- April 16. (Evening.) Recess begins, ending April 26 (evening).
- June 26, 28. *Examination for Admission to the Department of Literature, Science, and the Arts, to the Department of Engineering, and to the Four-Year Course in the School of Pharmacy.*
- June 27. *Baccalaureate Address.*
- June 29. *Class Day.*
- June 30. *Alumni Day.*
- June 30. *Examination for Admission to the College of Dental Surgery.*
- July 1. COMMENCEMENT IN ALL DEPARTMENTS OF THE UNIVERSITY. The Commencement Oration is to be delivered by ANDREW S. DRAPER, LL.D., President of the University of Illinois.
- Summer Vacation from July 2 to September 30.
- Sept. 23-28. *Examination for Admission to the Department of Literature, Science, and the Arts, to the Department of Engineering, and to the Four-Year Course in the School of Pharmacy.*
- Sept. 28-30. *Examination for Admission to the Department of Law.*
- Sept. 29, 30. *Examination for Admission to the Department of Medicine and Surgery, to the Two-Year Course in the School of Pharmacy, and to the Homœopathic Medical College.*
- Sept. 30. *Examination for Admission to the College of Dental Surgery.*
- Oct. 1. FIRST SEMESTER BEGINS IN ALL DEPARTMENTS OF THE UNIVERSITY.
- Nov. — Thanksgiving Recess of three days, beginning Tuesday evening, in all Departments of the University.
- Dec. 17. (Evening.) Holiday Vacation begins in all Departments.
- 1898.
- Jan. 4. Exercises resumed.
- Feb. 18. (Evening.) FIRST SEMESTER CLOSES.
- Feb. 21. SECOND SEMESTER BEGINS.
- April 15. (Evening.) Recess begins, ending April 25 (evening).
- June 30. COMMENCEMENT IN ALL DEPARTMENTS OF THE UNIVERSITY.

1897.

JANUARY							FEBRUARY							MARCH							APRIL							
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1898.

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PRESIDENT.

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HON. PETER N. COOK,	<i>Corunna,</i>	" 1899.
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HON. FRANK W. FLETCHER,	<i>Alpena,</i>	" 1901.
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*Professor Cooley has leave of absence, but delivers a brief course of lectures on the law of interstate commerce to advanced students in the Department of Law.

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*Absent on leave.

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28 Monroe Street.
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- CLARENCE G. WRENTMORE, B.S., *Instructor in Descriptive*
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-

*Absent on leave.

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36 East Kingsley Street.
TOBIAS DIEKHOFF, A.B., *Instructor in German.*
38 Packard Street.
CLARENCE L. MEADER, A.B., *Instructor in Latin.*
33 South Thayer Street.
ARTHUR G. HALL, B.S., *Instructor in Mathematics.*
36 Oakland Avenue.
CHARLES H. COOLEY, PH.D., *Instructor in Sociology.*
35 South Twelfth Street.
JOSEPH H. VANCE, LL.B., *Assistant Librarian in Charge of the*
Law Library. Ann Arbor Town.
*JOSEPH CLARK, *Superintendent of the University Hospital.*
HAMILTON REEVE, *Superintendent of Buildings and Grounds.*
44 East University Avenue.

Non-Resident Lecturers on Special Topics for 1896-97.

JAMES L. HIGH, LL.D., *Lecturer on Injunctions and Receivers.*
Chicago, Ill.
JOHN B. CLAYBERG, LL.B., *Lecturer on Mining Law.*
Helena, Mon.
MELVILLE M. BIGELOW, PH.D., *Lecturer on Insurance.*
Cambridge, Mass.
HENRY H. SWAN, A.M., *Lecturer on Admiralty Law.*
664 Woodward Avenue, Detroit.
OSCAR R. LONG, M.D., *Lecturer on Mental and Nervous Dis-*
eases in the Homœopathic Medical College. Ionia.
FRANK F. REED, A.B., *Lecturer on Copyright Law.* Chicago, Ill.
ALBERT H. WALKER, LL.B., *Lecturer on Patent Law.*
Hartford, Conn.

Other Appointments for 1896-7.

GEORGE A. HENCH, PH.D., *Acting Professor of Germanic*
Languages and Literatures. 40 South Ingalls Street.
HORACE L. WILGUS, M.S., *Acting Professor of Law.*
23 North University Avenue.
MYRON H. PARMELEE, M.D., *Acting Professor of Gynecology*
and Obstetrics in the Homœopathic Medical College.
1717 Jefferson Street, Toledo, O.
ALFRED H. LLOYD, PH.D., *Assistant Professor of Philosophy.*
41 South Twelfth Street.

*Died October 20, 1896.

- EMORY B. LEASE, PH.D., *Assistant Professor of Latin.*
37 South Division Street.
- VICTOR C. VAUGHAN, PH.D., M.D., *Lecturer on Toxicology in
its Legal Relations in the Department of Law.*
15 South State Street.
- HENRY C. ADAMS, PH.D., *Lecturer on the Railroad Problem in
the Department of Law.*
125 Hill Street.
- ANDREW C. McLAUGHLIN, A.M., LL.B., *Lecturer on Constitu-
tional Law and Constitutional History in the Department of
Law.*
16 Tappan Street.
- RICHARD HUDSON, A.M., *Lecturer on Comparative Constitu-
tional Law in the Department of Law.*
Corner of Tappan Street and Oakland Avenue.
- CLARENCE L. MEADER, A.B., *Lecturer on Roman Law in the
Department of Law.*
33 South Thayer Street.
- JONATHAN A. C. HILDNER, A.M., *Instructor in German.*
101 South Main Street.
- SIMON M. YUTZY, M.D., *Instructor in Osteology, and Assistant
Demonstrator of Anatomy.*
36 South State Street.
- LOUIS P. HALL, D.D.S., *Instructor in Dental Anatomy and
Operative Dentistry.*
132 Hill Street.
- JOHN W. DWYER, LL.M., *Instructor in Law.*
53 East Kingsley Street.
- THOMAS W. HUGHES, LL.M., *Instructor in Law.*
11 South State Street.
- FRANK W. NAGLER, B.S., *Instructor in Electrotherapeutics.*
44 South Twelfth Street.
- WILLIAM D. JOHNSTON, A.M., *Instructor in History.*
42 Broadway.
- GEORGE REBEC, PH.B., *Instructor in Philosophy.*
114 South State Street.
- FRANK R. LILLIE, PH.D., *Instructor in Zoology.*
43½ South Twelfth Street.
- WILLIAM H. WAIT, PH.D., *Instructor in Greek, Latin, and San-
skrit.*
6 Olivia Place.
- ALDRED S. WARTHIN, PH.D., M.D., *Instructor in Pathology.*
20 South University Avenue.
- JAMES W. GLOVER, PH.D., *Instructor in Mathematics.*
44 East Kingsley Street.
- LOUIS A. STRAUSS, PH.M., *Instructor in English.*
52 East University Avenue.
- EDWIN C. GODDARD, PH.B., *Instructor in Mathematics.*
12 Geddes Avenue.

16 *Members of the Faculties and other Officers.*

- HERBERT J. GOULDING, B.S., *Instructor in Descriptive Geometry and Drawing.* 5½ Mary Street.
- HENRY L. COAR, A.M., *Instructor in Mathematics.* 9 Walnut Street.
- VICTOR E. FRANCOIS, *Instructor in French.* 67 South Seventh Street.
- PERRY F. TROWBRIDGE, PH.B., *Instructor in Organic Chemistry, and Accountant in the Chemical Laboratory.* 16 Observatory Street.
- PENOYER L. SHERMAN, PH.D., *Instructor in General Chemistry.* 66 South State Street.
- DAVID L. DAVOLL, PH.C., *Instructor in Organic Chemistry.* 48 Thompson Street.
- ARTHUR LACHMAN, B.S., PH.D., *Instructor in General Chemistry.* 66 South State Street.
- CHARLES E. ST. JOHN, PH.D., *Instructor in Physics.* 10 South University Avenue.
- OTTO E. LESSING, A.B., *Instructor in German.* 2 North Thayer Street.
- FRANK H. DIXON, PH.D., *Instructor in History.* 82 Hill Street.
- JOHN R. ALLEN, B.S., M.E., *Instructor in Mechanical Engineering.* 18 South Ingalls Street.
- HERBERT H. WAITE, A.B., *Instructor in Bacteriology, and Dispensing Clerk in the Hygienic Laboratory.* 20 South Twelfth Street.
- JOHN T. FAIG, B.M.E., *Instructor in Mechanical Engineering.* 20 South Twelfth Street.
- CHARLES A. RABETHGE, M.D., *Instructor in the Gymnasium.* 51 South Thayer Street.
- SIDNEY D. TOWNLEY, M.S., *Instructor in Astronomy.* 83 Hill Street.
- JAMES G. LYNDS, M.D., *Demonstrator of Obstetrics and Diseases of Women in the Department of Medicine and Surgery.* 17 South State Street.
- ALICE L. HUNT, *Assistant in Drawing.* 16 South Thayer Street.
- FRED P. JORDAN, A.B., *Assistant in the General Library in charge of Catalogue.* 9 Olivia Place.
- CYRENUS G. DARLING, M.D., *Demonstrator of Surgery and Lecturer on Minor Surgery in the Department of Medicine and Surgery, and Clinical Lecturer on Oral Pathology and Surgery in the College of Dental Surgery.* 38 East University Avenue.
- BYRON A. FINNEY, A.B., *Assistant in the General Library in charge of Circulation.* 15 Tappan Street.
- JAMES P. BRIGGS, PH.C., *Pharmacist in the University Hospital.* 36 East Catherine Street.

- ALLISON W. HAIDLE, D.D.S., *Demonstrator of Dental Mechanism.* 60 Packard Street.
- JEANNE C. SOLIS, M.D., *Assistant to the Professor of Nervous Diseases and Electrotherapeutics in the Department of Medicine and Surgery.* 179 West Huron Street.
- JOHN B. JOHNSTON, Ph.B., *Zoological Assistant in General Biology.* 48 South University Avenue.
- THEODORE L. CHADBOURNE, B.S., M.D., *Demonstrator of Clinical Medicine in the Department of Medicine and Surgery.* 48 East Liberty Street.
- JAMES SEYMOUR, Ph.C., *Assistant in Pharmacy.* 28 East Huron Street.
- SAMUEL A. MATTHEWS, M.D., *Assistant in Pharmacology in the Department of Medicine and Surgery.* 21 South State Street.
- CHARLES D'A. WRIGHT, M.D., *Demonstrator of Ophthalmic and Aural Surgery and Clinical Ophthalmology and Otology in the Department of Medicine and Surgery.* 169 West Huron Street.
- CHARLES H. GRAY, M.L., *Assistant in English.* 114 South State Street.
- JAMES B. POLLOCK, M.S., *Assistant in Botany.* 3 Volland Street.
- WALTER N. FOWLER, M.D., *Superintendent of the University Hospital (Homœopathic), and Assistant to the Professor of Gynecology and Obstetrics in the Homœopathic Medical College.* 6 Lincoln Avenue.
- MARY L. WELLMAN LOOMIS, A.M., *Assistant in the General Library.* 33 East Madison Street.
- GERTRUDE BUCK, M.S., *Assistant in English.* 40 Washtenaw Avenue.
- FANNY E. LANGDON, B.S., *Assistant in Botany.* 21 Monroe Street.
- BURTON E. LIVINGSTON, *Assistant in Botany.* 43 Hill Street.
- BERTHA M. FISH, *Assistant in Botany.* 21 Monroe Street.
- NORMAN A. WOOD, *Assistant in Museum.* 46½ South University Avenue.
- CLARENCE H. LANDER, *Assistant in Vertebrate Morphology.* 27 North University Avenue.
- ALBERT W. DORR, A.B., *Assistant in Zoology.* 24 Geddes Avenue.
- JULIET M. BUTLER, *Assistant in Zoology.* 64 Washtenaw Avenue.
- JESSE E. WHITSIT, B.S., *Assistant in Chemistry.* 8 Lincoln Avenue.
- ANNIE M. LUTZ, M.S., *Assistant in the Zoological Laboratory.* 13 Monroe Street.
- ARMAND R. MILLER, *Assistant in Quantitative Analysis.* 31 Church Street.

- HERMAN E. BROWN, B.S., *Assistant in Qualitative Analysis.*
17 South Ingalls Street.
- JAMES G. VAN ZWALUWENBURG, *Assistant in Qualitative Chemistry.*
11 North State Street.
- FRANK E. LOGAN, *Assistant in the Clinical Department of the College of Dental Surgery.*
46½ South University Avenue.
- SAMUEL A. JEFFERS, A.B., *Assistant in Latin.* 16 Packard Street.
- ETHAN A. NEVIN, M.D., *House Surgeon in the University Hospital.*
University Hospital.
- CHARLES E. WHITE, M.D., *House Physician in the University Hospital.*
University Hospital.
- D. MURRAY COWIE, M.D., *Assistant to the Professor of the Theory and Practice of Medicine in the Department of Medicine and Surgery.*
26 Lawrence Street.
- HOMER E. SAFFORD, Ph.B., M.D., *Assistant to the Professor of Surgery in the Department of Medicine and Surgery.*
14 South State Street.
- CHESTER B. BLISS, M.D., *Assistant to the Professor of Ophthalmic and Aural Surgery in the Department of Medicine and Surgery.*
14 South State Street.
- CASPER K. LAHUIS, M.D., *Assistant to the Professor of Obstetrics and Diseases of Women in the Department of Medicine and Surgery.*
34 South State Street.
- DAVID G. COOLIDGE, M.D., *Demonstrator of Nervous Diseases and Electrotherapeutics.*
47 East Ann Street.
- GALEN G. CROZIER, B.S., *Assistant in Physiology.*
74 East Huron Street.
- FREDERICK A. BALDWIN, *Assistant in Histology.*
23 Geddes Avenue.
- HOWARD B. BAKER, B.S., *Assistant Demonstrator of Anatomy.*
108 East Huron Street.
- THOMAS S. BURR, A.B., *Assistant Demonstrator of Anatomy.*
6 North Division Street.
- LYDIA M. A. DE WITT, *Assistant Demonstrator of Anatomy.*
23 North State Street.
- ARTHUR E. WEST, *Assistant to the Lecturer on Dermatology.*
47 East Liberty Street.
- JULIAN Mc CLYMONDS, M.D., *Assistant in Hygiene.*
78 East Washington Street.
- SUMNER G. BUSH, M.D., *House Surgeon in the University Hospital (Homœopathic), Assistant to the Professor of Surgery, and Instructor in Minor Surgery in the Homœopathic Medical College.*
University Hospital (Homœopathic).

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- ALICE G. SNYDER, *Assistant to the Women's Dean in the Department of Literature, Science, and the Arts.* 19 North State Street.
ALBERT E. GREENE, PH.B., B.S., *Assistant to the Dean of the Department of Engineering.* 37 East William Street.
ARCHIBALD CAMPBELL, PH.B., *Assistant in Qualitative Chemistry.* 19 Willard Street.
AUGUST E. GUENTHER, *Assistant in the Museum.* 3 Elm Street.
CHARLES W. RYAN, M.D., *Assistant to the Professor of Ophthalmology, Otology, and Pædology in the Homœopathic Medical College.* 46 East Catherine Street.
THOMAS VAN URK, *Dispensing Clerk in the Electrotherapeutical Laboratory.* 40 East Catherine Street.
CHARLES L. BLISS, B.S., *Assistant in Physiological Chemistry.* 14 South State Street.
DUANE R. STUART, A.B., *Assistant in Latin.* 34 East Jefferson Street.
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Special Assistants in the Engineering Laboratory.

- ROBERT A. WINSLOW, *Foundry.* 32 Wall Street.
JOHN M. SMOOTS, *Iron Room.* 80 Forest Avenue.
HORACE T. PURFIELD, *Wood Room.* 36 South Twelfth Street.

UNIVERSITY OF MICHIGAN.

THE UNIVERSITY AND THE STATE.

THE University of Michigan is a part of the public educational system of the State. The governing body of the institution is a Board of Regents, elected by popular vote for terms of eight years, as provided in the Constitution of the State. In accordance with the law of the State, the University aims to complete and crown the work that is begun in the public schools, by furnishing ample facilities for liberal education in literature, science, and the arts, and for thorough professional study of engineering, medicine, pharmacy, law, and dentistry. Through the aid that has been received from the United States and from the State, it is enabled to offer its privileges, with only moderate charges, to all persons of either sex, who are qualified for admission. While Michigan has endowed her University primarily for the higher education of her own sons and daughters, it must be understood that she also opens the doors of the institution to all students, wherever their homes. It is in this broad, generous, and hospitable spirit, that the University has been founded, and that it endeavors to do its work.

ORGANIZATION OF THE UNIVERSITY.

The University comprises the Department of Literature, Science, and the Arts (including the Graduate School and the Summer School), the Department of Engineering, the Department of Medicine and Surgery, the Department of Law, the School of Pharmacy, the Homœopathic

Medical College, and the College of Dental Surgery. Each department, school, and college, has its special Faculty. The University Senate is a body representing all the faculties, and considers questions of common interest and importance.

In the Department of Literature, Science, and the Arts, different lines of study lead to the degrees of Bachelor of Arts, Bachelor of Philosophy, Bachelor of Science, Bachelor of Letters, the corresponding Masters' degrees, and the degrees of Doctor of Philosophy and Doctor of Science.

In the professional schools degrees are given as follows: In the Department of Engineering, the degrees of Bachelor of Science, Master of Science, Civil Engineer, Mechanical Engineer, and Electrical Engineer; in the Department of Medicine and Surgery, the degree of Doctor of Medicine; in the Department of Law, the degrees of Bachelor of Laws and Master of Laws; in the School of Pharmacy, the degrees of Pharmaceutical Chemist and Bachelor of Science; in the Homœopathic Medical College, the degree of Doctor of Medicine; in the College of Dental Surgery, the degrees of Doctor of Dental Surgery and Doctor of Dental Science.

Students in any department of the University may enter the classes in any other department, upon obtaining permission from the faculties of the respective departments.

THE LIBRARIES.

The libraries of the University are the General Library, the Medical Library, the Law Library, and the Library of the College of Dental Surgery. They contained in the aggregate, September 30, 1896, 105,047 volumes, 17,509 unbound pamphlets, and 1,197 maps.

THE GENERAL LIBRARY contains 84,698 volumes, 16,020 unbound pamphlets, and 1,197 maps. In this enumeration are included the following special collections: Parsons Library (political economy), 4,325 volumes and 5,000 pamphlets; McMillan Shakespeare Library, 4,001 volumes; Hagerman Collection (history and political science), 2,660 volumes; Goethe Library, 905 volumes; Dorsch Library (miscellaneous), 1,676 volumes and 148 pamphlets.

Five hundred and forty-six periodicals are taken.

The catalogue of the library is the usual card catalogue of authors and subjects.

Members of the faculties and other officers of the University may draw books from the library, subject to certain restrictions. To all other persons it is a reference library. The reading room for general use will

seat 210 readers. Separate rooms are provided for advanced students where work is pursued with the necessary books at hand.

The library is open for consultation fourteen hours daily during the academic year, nine hours daily during the six weeks of the Summer School, and six hours daily from the close of the Summer School until October 1. The only exceptions to the above are Sundays and legal holidays.

The income of the FORD-MESSER BEQUEST of \$20,000 and of the COYL BEQUEST of \$10,000, is used for the increase of the General Library.

THE MEDICAL LIBRARY, containing 7,510 volumes and 1,489 unbound pamphlets, is shelved with the General Library, and is consulted under the same regulations. One hundred and thirty-one medical journals are regularly received.

THE LAW LIBRARY, containing 12,064 volumes, occupies the large room on the first floor of the law building. The expenditure of the BUHL BEQUEST of \$10,000 for the enlargement of this library has begun and will be completed before the end of the year.

THE LIBRARY OF THE COLLEGE OF DENTAL SURGERY is shelved in a room in the dental building. It contains several sets of valuable periodicals and many of the most important treatises on the theory and practice of dentistry. The whole number of volumes is 775. Thirteen dental periodicals are taken.

THE ASTRONOMICAL OBSERVATORY.

The Observatory is known as the Detroit Observatory, having been founded through the liberality of citizens of Detroit. Valuable additions and improvements have been made by contributions from several sources. The building consists of a main part, with a movable dome, and two wings. The meridian circle in the east wing was presented by Mr. Henry N. Walker, of Detroit. It was constructed by Pistor & Martins, of Berlin. In the main part are mounted clocks by Tiede and Howard. The west wing contains the observatory library, which connects with the residence of the Director. The refracting telescope, mounted in the dome, has an object glass thirteen inches in diameter. It was constructed by the late Henry Fitz, of New York.

A small observatory near the main building is used in the work of instruction. It contains an equatorial telescope of six inches aperture, and a transit instrument of three inches aperture, with zenith telescope attachment.

THE MUSEUMS.

The University Museums contain collections illustrative of natural history, the industrial arts, chemistry, materia medica, anatomy, archæology, ethnology, the fine arts, and history, arranged in such a way as to render them accessible both to students and to visitors. The University affords a secure depository for objects of value and curiosity, and it is hoped that frequent gifts will be made to its several museums.

The museum building contains the collections in natural history, the industrial arts, archæology and ethnology, and the Chinese exhibit. The collections of works of art, including historical medallions and coins, are in the art gallery.

The following descriptions indicate the character of some of the collections belonging to the University. The collections specially used for instruction in medicine and in dentistry will be found described in the chapters devoted to the medical and dental schools.

NATURAL HISTORY.

I. THE MINERALOGICAL COLLECTION comprises about 6,000 specimens. It embraces about 2,500 specimens (principally European) purchased of the late BARON LEDERER, and known as the LEDERER COLLECTION; and, besides others, a rich collection of the MINERAL SPECIES OF MICHIGAN, including all varieties of copper ore and associated minerals from the Lake Superior mining region. Extensive additions to the collection have recently been made.

II. THE GEOLOGICAL COLLECTION consists of:

1. The large series of lithological and palæontological specimens brought together by the State geological survey, of which over a hundred fossil species have become the types of original descriptions.

2. THE WHITE COLLECTION, consisting of 1,018 distinct entries, 6,000 specimens, of invertebrate fossils.

3. THE ROMINGER COLLECTION, embracing about 5,000 species of invertebrate fossils, represented by at least 25,000 specimens. The collection contains (1) the types of all the palæozoic corals described by Dr. Rominger in the Geological Report of Michigan, volume iii.,—not alone the specimens figured, but numerous specimens of each species, which are not duplicates, but illustrations of different characters and varieties; (2) a collection of *Stromatoporoids*—probably the largest and finest in the world; (3) a similar collection of *Bryozoa*; (4) palæozoic fossils belonging to all the other classes; (5) European fossils of all classes and ages in large number—the sponges forming, with the American specimens, a collection of great interest. Since the purchase of this collection by the University, Dr. Rominger has added to it more than 250 species

of invertebrate fossils, represented approximately by 1,000 specimens, among which there are many of great value.

4. SMITHSONIAN DEPOSITS, consisting, for the present, of a collection of specimens of foreign and domestic building stones, and twenty-three specimens of fossils from the Upper Missouri.

5. MISCELLANEOUS DONATIONS, COLLECTIONS, AND PURCHASES, including a series illustrative of the metalliferous regions of the Upper Peninsula, collected by the late Professor Winchell, an interesting collection of fossils, chiefly Cretaceous, from the Yellowstone Valley, presented by the late General Custer, U. S. A., and a series of six to eight hundred rock species and varieties from the Drift of Ann Arbor, collected, dressed to standard size and form, and presented by the late Miss Eliza J. Patterson. A collection of 150 specimens of ores and rocks has recently been presented by the U. S. National Museum.

The entire collection is estimated to contain approximately 17,000 entries and about 60,000 specimens, almost all of which are invertebrate fossils.

The collection has recently been enlarged by the following donations, exchanges, etc., acknowledged in the Calendar for 1895-96: Thirty-nine specimens of copper ore and associated rocks, from the Wolverine copper mine, presented by Mr. Fred Smith; seven specimens of native copper and associated rock, from the Calumet and Hecla Mine, presented by the Calumet and Hecla Mining Company; twenty-five specimens of asphaltum and of petroleum from various localities, presented by Mr. S. F. Peckham; samples of brine and salt from Percy's salt well, Mason Co., Mich., presented by Mr. H. C. Mendelsohn; two fine samples of glaciated stones from Frankfort, Mich., presented by Mr. E. N. Slocum; forty species of Cretaceous and Tertiary fossils from Texas, presented by the Geological Survey of Texas.

III. THE ZOOLOGICAL COLLECTIONS are very large. They comprise a series illustrative of the fauna of Michigan and other northern and western States; a collection of the animals of the Pacific Coast made by Lieutenant Trowbridge; many valuable specimens collected in the Philippine Islands by Dr. Steere in the years 1887 and 1888; and specimens from other foreign countries obtained through the medium of the Smithsonian Institution.

THE BEAL-STEERE ZOOLOGICAL COLLECTION, made by Dr. Steere in the years 1870 to 1876, comprises numerous corals, shells, insects, birds, and mammals from South America, China, Formosa, the Philippines, and the Moluccas.

IV. THE BOTANICAL COLLECTION contains, in addition to Michigan plants collected by the public surveys, several valuable herbaria and sets of plants that have been presented to the University from time to time.

Among these, some of the most important are the HOUGHTON HERBARIUM, the SAGER HERBARIUM, the AMES HERBARIUM, the HARRINGTON COLLECTION, the BEAL-STEERE BOTANICAL COLLECTION, the ADAMS-JEWETT COLLECTION, and the GARRIGUES COLLECTION, all of which have been described in Calendars of previous years.

Among the more recent acquisitions are Collins, Holden, and Setchell's Phycotheca Boreali-Americana, Briosi and Cavara's Funghi Parassiti, Seymour and Earle's Economic Fungi, the continuation of Ellis's North American Fungi, presented by Mr. Joseph B. Whittier, and large additions to the cryptogamic flora of Michigan, arranged and catalogued by Mr. L. N. Johnson.

The whole botanical cabinet contains about 70,000 specimens, representing 10,000 species under 20,000 entries.

CHINESE EXHIBIT.

In 1885 the Chinese Government presented to the University the exhibit which it sent to the New Orleans Exposition. The collection, numbering several thousand specimens, is on exhibition in one of the rooms of the museum building. It illustrates with special fulness the varieties of Chinese cotton, the Chinese processes of manufacturing cotton, and the finished products of cotton and silk. There are many articles showing the skill of the Chinese in working in wood, in ivory, and in porcelain, in embroidery, and in painting on glass and on silk.

CHEMISTRY AND PHARMACOGNOSY.

THE MUSEUM OF APPLIED CHEMISTRY comprises collections in educational chemistry, the chemical industries, pharmacy, and pharmacognosy. It occupies a floor space of 2,500 square feet in the chemical building, and is provided with permanent cases.

The principles of chemical science are illustrated by groups of synthetic products, as progressive formations, and by related compounds, both natural and artificial.

The chemical industries are represented by collections of the materials and the successive products of manufacture, and the resources and methods of industrial art. The outlines of chemical technology are presented with models and plans, giving object lessons in the modern production of alkalies and acids, dyes and pigments, soaps, distillates, etc.

In pharmacognosy, the collection of medicinal plants is extensive and well chosen for instruction both in botany and in commercial history. The crude drugs are displayed in comparison with their active constituents, each in its proportional quantity. Pharmacy is exemplified in the preparations of the pharmacopœia and the appliances of skilful manipulation.

Of all these collections a good share originates in the work of students engaged in special lines of study and research.

ARCHÆOLOGY AND ETHNOLOGY.

This department contains a collection of the arms, agricultural implements, carpenter's tools, musical instruments, and idols of the Chinese, belonging to the BEAL-STEERE COLLECTION, together with many articles of domestic and warlike use among the North American Indians and the Islands of the South Pacific, numerous remains of the ancient Peruvians, and many specimens of clothing, art, etc., of the American Indians, modern Peruvians, Formosans, and natives of the East Indies and Alaska. The Chinese exhibit above referred to contains a large number of articles illustrative of ethnology. From the Smithsonian Institution there have been received a comprehensive collection of casts of objects from Europe and from the mounds of the Ohio valley, and a fine collection of pottery from the cliff dwellings of New Mexico and Arizona. The valuable collection made by the late David DePue, mostly from Washtenaw County, Mich., and a collection of flint implements from Denmark have recently been added.

THE FINE ARTS AND HISTORY.

The works of art belonging to the University are on exhibition in the galleries provided for them in the library building. A printed catalogue, prepared by Professor D'Ooge, contains fuller descriptions than can here be given. The collection was begun in 1855. It contains a gallery of casts, in full size and in reduction, of some of the most valuable ancient statues and busts, such as the Apollo Belvedere, the Laocoon, and the Sophocles; more than two hundred reductions and models in terra cotta and other materials; the statue of Nydia by Randolph Rogers; casts of modern statues, busts, etc., and reliefs; a number of engravings and photographic views, illustrating especially the architectural and sculptural remains of ancient Italy and Greece; a small collection of engraved copies of the great masterpieces of modern painting; two series of historical medallions—the HORACE WHITE COLLECTION, and the GOVERNOR BAGLEY COLLECTION—the former illustrative of ancient, mediæval, and modern European history, the latter designed to embrace the commemorative medals struck by order of Congress or other authorities, and now containing one hundred such medals; and a large collection of coins, chiefly Greek and Roman, presented to the University by the late Dr. A. E. Richards.

The ROGERS GALLERY comprises the entire collection of the original casts of the works of the late Randolph Rogers, more than a hundred in number. It was given by that distinguished sculptor to the State of Michigan for the University museum.

The late Henry C. Lewis, of Coldwater, by his will bequeathed to the University his valuable collection of works of art comprising about six hundred and fifty paintings and forty pieces of statuary. This collection has recently come into the possession of the University. It has been placed provisionally in the art gallery, where, however, it cannot be exhibited to advantage for lack of room.

THE LABORATORIES.

In the several laboratories of the University opportunities are provided for practical instruction in physics, chemistry, geology, zoology, psychology, botany, engineering, histology, physiology, hygiene, pathology, anatomy, and dentistry. The laboratories designed primarily for students of engineering, of medicine, and of dentistry are described in the chapters devoted to the engineering, the medical, and the dental schools.

THE PHYSICAL LABORATORY.

The basement of the physical laboratory has a German rock-asphaltum floor, with heavy stone-capped piers in every work room, and is devoted entirely to experimental work in electricity and magnetism. The engine room contains a 10" by 14" Russell horizontal engine with countershaft and friction clutch, an Edison shunt-wound dynamo of 5,000 watts capacity, a Sperry and a Brush 10-arc-light machine, with lamps for both, a Gramme machine of 5,000 watts made in 1877, a Fort Wayne 300-light alternator, with converters and all the appliances for a complete alternating plant, a Fisher 225-light constant-potential machine, and a floating dynamometer. In an adjacent room are placed electro-dynamometers, ammeters, voltmeters, a wall resistance of iron wire constructed to absorb about 35 H-P of electrical energy, and a bank of 225 incandescent lamps. The photometric room, with blackened walls, and lighted only artificially, is also adjacent to the engine room.

A battery room well ventilated and lighted, and supplied with water, contains a large storage battery. Five smaller work rooms are fitted with the usual appliances for electrical measurements.

On the first floor are a commodious lecture room, an apparatus room, a general laboratory for elementary work, a balance room, a mercury room, and two rooms for a private laboratory.

The laboratory is supplied with the most modern apparatus from the best American and European makers. In sound, it includes tuning forks and resonators from Koenig of Paris; in light, a spectrometer with 12-inch divided circle, an ophthalmo-spectroscope from the Geneva Society, an optical bench, with accessories, from Duboscq, a Zeiss focometer, a Zeiss spectrometer, and a polarimeter from Schmidt and Haensch; in electri-

city, galvanometers and resistance boxes, up to 250,000 units, from Edelmänn, Hartmann & Braun, Elliott Brothers, Nalder Brothers & Co., and Queen & Co., besides condensers, voltmeters, and ammeters; also Lord Kelvin's graded galvanometers, a centi-ampere, a deci-ampere, and a deka-ampere balance made by White, of Glasgow. Among the standards are standard cells, a standard 100-ohm, a 10-ohm, and three 1-ohm coils, two standard condensers, and Ayrton and Perry's standard of self-induction, with a secohmmeter by Nalder Brothers.

The work in the laboratory is entirely quantitative in character, but provision has been made for illustrating the general principles of physics in the lecture courses.

CHEMICAL LABORATORIES.

The chemical laboratories provide for classes in general, analytical, organic, and physical chemistry, in pharmacy, in chemical technology, and in metallurgical assaying. They also provide for original research in the several branches of chemical science and for independent investigations. In the course of the year, classes are formed in forty-four distinct courses of study. In the greater number of these courses the method of work combines training in laboratory operations with instruction by lectures and conference, these methods being united in one course.

The chemical building contains in all about 37,000 square feet of floor space. Besides the rooms for recitations, storage, administration, etc., the laboratories for students have an area of about 25,000 square feet.

The laboratory of general chemistry is separately organized. Courses in elementary inorganic chemistry, as well as in physical chemistry and the advanced branches of the science are offered; research work both in inorganic and in organic general chemistry is also arranged for a limited number of students, and is carried on in a separate room. Modern apparatus is on hand for all the varieties of work that are liable to be undertaken, and a well-equipped balance room is provided.

The laboratories of analytical chemistry, organic chemistry, pharmacy, and chemical technology, are carried on together. There are separate work rooms for qualitative analysis, quantitative analysis, iron and steel analysis, electrolytic work, pharmaceutical preparations, organic preparations, organic analysis, medical chemistry, and assaying of ores,—as well as rooms for the weighing-balances and instruments of precision, for gas analysis, and for optical work. There are eleven separate rooms for original research. The building contains two lecture rooms, two recitation rooms, and a museum with collections for instruction in chemistry, pharmacy, pharmacognosy, and chemical technology. In the ventilation of the work rooms the supply of fresh air is enforced by driving fans, and

the removal of foul air is effected by strong draught flues, with which, also, work-hoods are connected.

The chemical laboratories are open throughout the college year to all students of the University, and are regularly used by the several departments. They are also open to any person who wishes to pursue special studies therein, provided he complies with the conditions for admission to that department of the University to which the desired special studies properly belong.

Three hundred and eighty students are engaged in these laboratories at the same time, each at a table provided for one worker. During the year, from 600 to 800 students complete from one to four courses of study each in the various branches of chemistry. The students engage in chemical work as it is needful for their different purposes,—the pursuit of science, or the preparation for teaching, for the several professions applying chemistry, and for the various chemical arts and industries.

The chemical library contains complete sets of all the most important chemical journals of present and former times, as well as the standard manuals, dictionaries, and encyclopedias. It thoroughly provides for all kinds of chemical work.

GEOLOGICAL LABORATORY.

Opportunity for practical work in geology is provided in rooms set apart for this use in the museum building. The rooms are furnished with microscopes, photographic instruments, cutting and polishing lathes, and other apparatus for the preparation of specimens. Special encouragement and assistance are given to students wishing to carry on original investigations.

BOTANICAL LABORATORY.

In the botanical laboratory instruction is given in the practical study of the structure, development, and physiology of plants, and opportunity is offered for investigation in cellular biology, in embryology and development, in some provinces of physiology, and in pathology.

The laboratory is provided with microscopes, microtomes, means for embedding, stains, reagents, aquaria, Wardian cases, klinostat, auxanometer, self-registering apparatus, sterilizers, and facilities for making pure cultures of algæ and fungi. There is a good working library in the laboratory containing, besides many monographs, the leading French, German, and English periodicals.

Students in the more elementary courses have constant personal assistance and direction from the instructors; the advanced courses require more independent work. Every facility within the means at command will be provided for those capable of doing work in research.

ZOOLOGICAL LABORATORY.

The zoological laboratory comprises twelve rooms in the second and third stories of the south wing of University Hall, with about 6,000 square feet of floor space, and is lighted by thirty-five windows. There is a large room for the elementary work of students, and a smaller room for more advanced work in vertebrate morphology. These two rooms accommodate about fifty students at one time. There is a room for the housing of small mammals, a room for the storage of alcoholic material, and a room in which a reference library is shelved. The professor in charge has a private room; and four smaller rooms, each accommodating one or two persons, are used by the instructors and by students engaged in investigation. These rooms are provided with water and gas, and are fitted with tables especially designed for the work. A room for work in experimental zoology, a small lecture room, and a photographic room have been recently equipped. There are also rooms set apart in the museum building for the use of persons engaged in the study of museum material.

Suitable provision has been made for the study of animals inhabiting the neighboring waters. There are ten aquaria (the largest seven feet long), and there are arrangements for maintaining thirty smaller aquaria for the rearing of embryos and the study of isolated forms.

There is good equipment of microscopes, including a Zeiss microscope with apochromatic lenses, and of microtomes and accessory apparatus. For illustrative purposes, there is a collection of alcoholic specimens (many of them from the Naples Zoological Station), a set of Leuckart and Nitsche's wall charts and of Ziegler's wax models, and a small collection of Blaschka's glass models.

PSYCHOLOGICAL LABORATORY.

The psychological laboratory consists of two rooms, one 30 by 20 feet, with a 500-volt motor running the color mixer and kymograph, and one 9 by 20 feet containing the Hips chronoscope, large Auzoux models of the brain and sense-organs, and instruments for optical, acoustical, temperature, and tactile experiments. The equipment includes instruments for the study of the time-sense, sense of position, attention, memory, association, æsthetics, and the motor effect of ideas and the emotions. There is also a supply of material necessary for all ordinary psychological experiments. The equipment is increased from time to time as the character of the investigation demands.

The work is of two kinds: (1) demonstrator courses intended to give a general knowledge of the experimental methods, and of their relation to the more theoretical aspects of psychology; (2) courses in original research in which advanced students are expected to pursue lines of work

for a more or less extended period in some one field of experiment. It is the aim of the laboratory to furnish every possible facility for such research work by competent students.

THE HOSPITALS.

There are two hospitals connected with the University, and they afford ample facilities for clinical instruction. One of the two is under the direction of the Faculty of the Department of Medicine and Surgery; the other is in charge of the Faculty of the Homœopathic Medical College. Further information in regard to the hospitals is given in connection with the descriptions of the medical schools.

AIDS TO MORAL AND RELIGIOUS CULTURE.

[Vesper services are held Tuesday and Thursday afternoons in University Hall, open to all members of the University and to the public.

The Students' Christian Association, which has a large membership, holds stated meetings for religious and for social improvement. Through the enterprising efforts of the Association and the benevolence of those interested in its aims, a spacious and beautiful building, called Newberry Hall, has been erected for its use adjacent to the University Campus.

The churches of the city of Ann Arbor are cordially thrown open to the students, whose interests are largely consulted by the pastors in their pulpit instruction and in their plans of work. There are churches of the following communions in the city: Baptist, Congregationalist, the Disciples, German Lutheran, German Methodist, Methodist Episcopal, Presbyterian, Protestant Episcopal, Roman Catholic, and Unitarian.

Guilds, and other societies, consisting chiefly of students, have been organized in several of the churches both for religious and moral culture and for social entertainment. The Hobart Guild, connected with St. Andrew's Church (Protestant Episcopal), has a commodious building, called Harris Hall (formerly known as Hobart Hall), planned and equipped for all the objects of the Guild; and two of the several lectureships contemplated in its plans have been endowed, the Baldwin Lectures for the Establishment and Defence of Christian Truth, and the Charlotte Wood Slocum Lectureship on Christian Evidences. The Tappan Presbyterian Association now occupies its new building, known as McMillan Hall; it owns a theological library of several thousand volumes, and maintains annual courses of lectures upon church history and church work. The Methodist Episcopal church has organized the Wesleyan Guild, and has a permanent fund for the support of the Henry M. Loud Lectureship. Unity Club is a society formed by the Unitarian church

with similar purposes. The Foley Guild is an organization of Roman Catholic students under the patronage of the Rt. Reverend John S. Foley, bishop of the diocese. The society organized in connection with the Church of the Disciples is called the Inland League.

FACILITIES FOR PHYSICAL CULTURE.

Waterman Gymnasium.—The University is provided with an excellent gymnasium which has cost about \$65,000. Of this sum \$20,000 was given by the late Joshua W. Waterman, of Detroit, in honor of whom the building is named, about \$26,000 was raised by private subscription, and \$6,000 was turned over by the trustees of a fund that has been accumulated in recent years through the efforts of students. The main floor, which is a rectangle with truncated corners and dimensions of 150 by 90 feet, is well supplied with the various kinds of apparatus usually found in the best modern gymnasiums. A number of the smaller rooms are devoted to administration, fencing, boxing, and other special purposes, while the basement is given up to baths and lockers. The main hall is lighted in the daytime by means of a large skylight 60 feet above the floor, and in the evening by electricity. A gallery makes room for an elliptical running-track 375 feet in length.

In the conduct of the gymnasium the aim is not so much the development of a few gymnastic experts as the provision of wholesome physical exercise for the many. Thus far the work has been voluntary. The facilities of the building, including physical examinations and instruction, are free to all students, the only charge being a rental of \$2 a year for a locker.

Women's Building.—In 1895 the sum of \$35,000 was contributed by a few friends of the University for the purpose of providing gymnasium facilities for the women students, with the understanding that a further sum of \$15,000 should be secured from other sources. That additional sum has not yet been entirely raised, but the erection of the building has been begun and the exterior has been completed. The plan of its construction includes, in addition to a fine gymnasium with the necessary bathing facilities, a commodious hall for lectures and meetings, and parlors for the accommodation of the women. The need of all these is imperative, but funds are lacking with which to complete the work. At present a portion of the unfinished structure is partitioned off and temporarily fitted up for gymnasium work. The Women's Dean, Dr. Eliza M. Mosher, assisted by an instructor, Miss Alice G. Snyder, is organizing the work of physical education for the women of the University in accordance with the best known methods. Special care is taken to adapt the work to the degree of physical development of the individual, and thus

to avoid producing injury by over-exertion. It is hoped that the money needed to complete the building will soon be forthcoming, so that the women students, about 600 in number, may have opportunity for the physical development essential to a liberal education.

Supervision of Athletics.—A level field of ten acres, owned by the University and situated a few minutes walk southward from the campus, has been set apart and equipped especially for open-air sports. The campus itself still provides room for tennis-courts and also for a small practice-ground close by the gymnasium. The general supervision of athletic sports is vested in a committee of nine, consisting of five professors elected annually by the University Senate, and four students chosen by the Students' Athletic Association. The Board of Control thus constituted has charge of all matters involving the relation of athletic sports to the University; for example, the eligibility of players proposed for any University team, the arrangement of intercollegiate games, the granting of leaves of absence, and the investigation of charges of misconduct on the part of players. The policy of the Board is to foster the spirit of honor and gentlemanliness in athletics, to suppress evil tendencies, and to see to it that play shall not encroach too much upon the claims of work. For the furtherance of these ends certain specific rules and regulations have been adopted, a copy of which can be had on application to the Steward of the University.

ORATORICAL ASSOCIATIONS.

Through the agency of voluntary associations and by working in connection with student organizations in other institutions, an active and earnest interest in elocution and oratory is fostered and maintained.

NORTHERN ORATORICAL LEAGUE.

The Northern Oratorical League is composed of the college oratorical associations of the University of Michigan, Northwestern University, the University of Wisconsin, Oberlin College, the State University of Iowa, and the University of Chicago. The purpose of the League is to foster an interest in public speaking and to elevate the standard of oratory by holding annual contests. The contests of the League are open only to undergraduates.

Peck Testimonials.

Through the generosity of Mr. Ferdinand W. Peck, of Chicago, the Northern Oratorical League receives an annual endowment of \$150, to be awarded to the honor contestants as follows: First Honor, \$100; Second Honor, \$50.

CENTRAL DEBATING LEAGUE.

The Central Debating League is composed of the college debating associations of the University of Michigan, the University of Wisconsin, Northwestern University, and the University of Chicago. Its purpose is to discuss in public leading questions of the day and in this way to develop ready and useful speakers.

The four Universities are arranged in two groups for the semi-final debates. On the first Friday in April in each year the winners from the groups meet in a final contest in debate at the Chicago Auditorium.

Peck-Revell Testimonials.

Through the agency of Mr. Ferdinand W. Peck and Mr. Alexander H. Revell, of Chicago, the Central Debating League is guaranteed an annual endowment of \$200, to be distributed as follows: \$150 to the side winning in the debate; \$50 to the losing side.

UNIVERSITY ORATORICAL ASSOCIATION.

The University Oratorical Association was organized by students of the Department of Literature, Science, and the Arts, and of the Department of Law, under the guidance of the Professor of Elocution and Oratory, to foster an interest in oratory and debate, and also to take part in the annual contests of the Northern Oratorical League and of the Central Debating League.

At the annual oratorical contest held the third Friday of March, the students who take first and second honors respectively are designated to represent the University as orator and alternate in the annual contest of the Northern Oratorical League, and are also awarded testimonials, as follows: First Honor, the Chicago Alumni Medal and \$75; Second Honor, \$50.

In 1896 the first and second honors were awarded respectively to Fred Lewis Ingraham, and William Maurice Mertz.

The Chicago Alumni Medal and Testimonial.

The Chicago Alumni Association of the University of Michigan offers annually a bronze medal and a testimonial of seventy-five dollars for excellence in oratory. The medal, designed by Mr. Louis H. Sullivan, of Chicago, is given to the student who is awarded the first honor in the annual oratorical contest.

At the annual debating contest held the last Friday in January, the students receiving the first, second, and third honors, respectively, are designated to represent the University in the annual contest of the Central Debating League. They are also awarded testimonials, as follows: First Honor, \$50; Second Honor, \$30; Third Honor, \$20.

UNIVERSITY ORGANIZATIONS.

Lecture Association.—The Students' Lecture Association provides each year, at a low price for admission, an attractive series of lectures and musical entertainments.

Choral Union.—The Choral Union is an organization of students and others, for the study and practice of choral music under the direction of the Professor of Music in the University, and for the promotion of general musical culture. Under its auspices, and with the cooperation of the University Musical Society,* the following course of concerts is announced for the year 1896-97:

- I. Theodore Thomas's Chicago Orchestra.
- II. Choral Union Concert: Oratorio of The Messiah.
- III. Carl Halir, violinist, and J. Erich Schmaal, pianist.
- IV. Piano Recital: Alberto Jonás.
- V. Song Recital: Plunket Greene.
- VI, VII, VIII, IX, X. May Festival: a series of five concerts on three successive days in May.

The Columbian Exposition Organ, which has been purchased for the University and is now known as the Frieze Memorial Organ, in memory of the late Professor Henry Simmons Frieze, is used in this course of concerts. It is also used at the regular vesper services.

Other Organizations.—Several organizations of University officers and students are maintained for the reading of papers and the holding of conferences on topics of interest that do not fall within the scope of ordinary class-room work; and some of them also aim to secure each year speakers of prominence to give public addresses on subjects germane to the purpose of the organization.

The students of the Department of Law arrange annually for a celebration of Washington's birthday. The address in 1896 was given by Hon. Benjamin Butterworth, of Cincinnati, Ohio.

RELATION OF STUDENTS TO THE CIVIL AUTHORITIES.

Students are temporary residents of the city, and, like all other residents, are amenable to the laws. If guilty of disorder or crime, they are liable to arrest, fine, and imprisonment. A rule of the University Senate

*The University Musical Society is a body corporate under the laws of the State of Michigan. It has no organic connection with the University, though its membership is restricted to past and present University officers and students. This Society has established the University School of Music in Ann Arbor, in which systematic instruction is given in vocal and instrumental music, such as the University cannot undertake to provide. A series of ten chamber concerts is included in its annual programme. Catalogues of the school can be had by applying to Professor A. A. Stanley.

provides that if a student is arrested, or is convicted by the civil authorities, he shall be cited to appear before the Faculty of the department in which he is matriculated, and shall be liable to suspension or expulsion.

FEES AND EXPENSES.

Matriculation Fee.—Every student before entering any department of the University is required to pay a matriculation fee. This fee, which, for citizens of Michigan, is ten dollars, and for those who come from any other State or country, twenty-five dollars, is paid but once, and entitles the student to the privileges of permanent membership in the University.

Annual Fee.—In addition to the matriculation fee, every student has to pay an annual fee for incidental expenses. This fee is paid the first year of residence at the University, and every year of residence thereafter. Resident graduates are required to pay the same annual fee as undergraduates. The annual fee in the several departments of the University is as follows:

Department of Literature, Science, and the Arts: for Michigan students, thirty dollars; for all others, forty dollars.*

Department of Engineering: for Michigan students, thirty-five dollars; for all others, forty-five dollars.*

Department of Medicine and Surgery: for Michigan students, thirty-five dollars; for all others, forty-five dollars.

Department of Law: for Michigan students, thirty-five dollars; for all others, forty-five dollars.

School of Pharmacy. for Michigan students, thirty-five dollars; for all others, forty-five dollars.

Homœopathic Medical College: for Michigan students, thirty-five dollars; for all others, forty-five dollars.

College of Dental Surgery: for Michigan students, thirty-five dollars; for all others, forty-five dollars.

The matriculation fee and the annual fee must be paid at the beginning of the college year. A by-law of the Board of Regents provides that no student or graduate shall be allowed to enjoy the privileges of the University until he has paid all fees that are due.

Laboratory Expenses.—Students who pursue laboratory courses of study are required to pay for the materials and apparatus actually consumed by them. The deposits required in advance are different for the different courses, ranging from one to twenty dollars. The laboratory expenses of students will vary with their prudence and economy. Expe-

*An annual fee of ten dollars is required from all graduates who are granted the privilege of pursuing studies for an advanced degree *in absentia*.

rience has shown that in the chemical laboratory the average expense for all courses is about one dollar and twenty cents a week.

Diploma Fee.—The fee for the diploma given on graduation is ten dollars, and the by-laws of the Board of Regents prescribe that no person shall be recommended for a degree until he has paid all dues, including the fee for diploma.

Other Expenses.—Students obtain board and lodging in private families for from three to five dollars a week. Clubs are also formed in which the cost of board is from one dollar and a half to two dollars and a half a week. Room rent varies from seventy-five cents to two dollars a week for each student. The annual expenses of students, including clothing and incidentals, are on the average, about three hundred and seventy dollars. The University does not undertake to furnish manual labor to students; yet a few find opportunities in the city for remunerative labor.

There are no dormitories and no commons connected with the University. Students on arriving in Ann Arbor can obtain information in regard to rooms and board by calling at the Steward's office.

Department of Literature, Science, and the Arts.

THE Department of Literature, Science, and the Arts owes its name to a provision in the legislative act under which the University was organized in the year 1837. In this department the aim is to cover the broad field of general university study of the ancient and the modern languages and literatures, of history, philosophy, mathematics, science, and the liberal arts, as distinguished from the more special work of the professional schools in engineering, medicine, law, pharmacy, and dentistry. To this end it provides a large number of courses of instruction, from which the candidates for the several degrees offered may make selection. Provision is also made for students who wish to take special courses, or to pursue miscellaneous studies, without being candidates for a degree. The conditions on which such students are admitted are stated on page 46.

The Graduate School established in connection with this department is under the direction of an Administrative Council, appointed from the Faculty of the department.

The academic year extends from the first day of October to the Thursday following the last Wednesday in June.

ADMISSION OF UNDERGRADUATES.

[For admission to advanced standing, see page 45.]

[For admission of students not candidates for a degree, see page 46.]

Applicants for admission must be at least sixteen years of age, and must present satisfactory evidence of good moral

character. They must bring credentials from their last instructor, or from the last institution with which they have been connected. These credentials must be presented to the Dean of the Department, at his office in University Hall, at the time application for admission is made.

The conditions on which students are admitted on diploma from approved schools are stated on page 48.

Unless admitted on diploma, any student who desires to become a candidate for a degree must pass examinations in some one of the four groups of subjects described below. The degree ultimately taken by the student will be determined by the particular set of requirements for graduation, described on pages 102 to 107, that he may complete.*

Accredited graduates of the English course of a diploma school and such other persons as shall pass an examination in all the studies described below in Group IV, with the exception of the requirement in a foreign language, may be admitted as special students with the right to make up the additional requirement and become candidates for a degree.

GROUP I.

In Group I the subjects on which applicants for admission will be examined are as follows:

English.—*Grammar.*—Selections for analysis and parsing will be set, arranged to test the applicant's knowledge of the leading facts of English Grammar. To meet this requirement, a review of the subject should be had during the last year of the preparatory course.

Composition and Rhetoric.—The purpose of the examination in composition is to test the applicant's ability to write good English. To this end he will be asked to write two essays of not less than two hundred words each, one upon a subject drawn from the books mentioned below,

* The courses of study offered in the University presuppose an adequate preparation on the part of the student, and it will, therefore, be necessary for a person who wishes to earn a particular degree to arrange his preparatory work with that end in view. For example, a person who intends to enter at once on the University courses in Greek and Latin prescribed for the degree of Bachelor of Arts, must be prepared on the admission requirements in Group I. Those who intend to take the degree of Bachelor of Philosophy may present the subjects named in Group I, in Group II, or in Group III, provided four years of Latin are offered as the requirement in foreign language. Group III or Group IV gives suitable preparation for work leading to the degree of Bachelor of Science or of Bachelor of Letters.

and the other upon a subject drawn from his experience or observation. The language of these essays must be grammatical and clear. The spelling, punctuation, and capitalizing must be correct. The applicant must show ability to discriminate in the use of words and to construct well-organized sentences and paragraphs. A topical outline should accompany each essay.

As preparation for this requirement, sustained and regular practice in writing is earnestly recommended. The student should prepare numerous written exercises throughout the four years of the high-school course, and a sufficient number of these exercises should be corrected by the teacher and revised by the student to secure the desired accuracy. The subjects upon which the student writes should not be drawn exclusively from literature; a considerable proportion of them should be taken from the student's every-day experience; and topics should be so distributed as to give proper training in the various types of discourse, namely, description, narrative, argument, and exposition. The student should be grounded in the essentials of rhetoric, but those principles should receive emphasis which are most likely to be of service to him in his practice in writing, such as the principles of sentential structure, paragraphing, and the outlining of the essay. The correction of stock specimens of bad English is not recommended, and will form no part of the entrance requirement.

It is further recommended that the reading of English classics and the memorizing of notable passages, both in prose and poetry, should form a regular exercise throughout the whole preparatory period. This is all-important for the development of a correct taste in language and literature.

The books, from which subjects for compositions will be chosen in the years named, are here given. The applicant should make himself familiar with the plot, incidents, and characters of each work. Equivalents will be accepted.

1897. Shakespeare's *As You Like It*, or *The Merchant of Venice*; Defoe's *Journal of the Plague Year*; Scott's *Marmion*; Longfellow's *Evangeline*; George Eliot's *Silas Marner*; Irving's *Tales of a Traveller*.

1898. Milton's *Paradise Lost*, Books I and II; Pope's *Iliad*, Books I and XXII; Goldsmith's *The Vicar of Wakefield*; Southey's *Life of Nelson*; Lowell's *The Vision of Sir Launfal*; Hawthorne's *The House of Seven Gables*.

1899. Chaucer's *The Knight's Tale*, or Dryden's *Palamon and Arcite*; Milton's *Paradise Lost*, Books I and II; Pope's *Iliad*, Books I, VI, XXII, and XXIV; The Sir Roger de Coverley Papers in *The Spectator*; Goldsmith's *The Vicar of Wakefield*; Scott's *Ivanhoe*; De Quincey's *Revolt of the Tartars*; Cooper's *The Last of the Mohicans*; Lowell's *The Vision of Sir Launfal*; Hawthorne's *The House of Seven Gables*.

1900. Chaucer's *The Knight's Tale*, or Dryden's *Palamon and Arcite*; Milton's *Paradise Lost*, Books I and II; Pope's *Iliad*, Books I, VI, XXII, and XXIV; The Sir Roger de Coverley Papers in *The Spectator*; Goldsmith's *The Vicar of Wakefield*; Scott's *Ivanhoe*; De Quincey's *Revolt of the Tartars*; Cooper's *The Last of the Mohicans*; Macauley's *Essay on Milton*; Burke's *Conciliation with the Colonies*.

English Literary History.—In addition to the books just named, it is expected that several other English Classics will be read each year. These readings should be connected, in reasonable measure, with the lives and characters of the authors read and with the history of their times. A good knowledge of the chronological order and of the leading characteristics of the principal modern English writers should be aimed at. Care should be taken not to overload the text of these classics with a mass of irrelevant and petty learning. Many of the "school classics" now in use are over-edited.

History.—General History as presented in such works as Myers's General History or Fisher's History of the Nations (or Myers's History of Greece together with Allen's History of Rome).

Mathematics.—*Algebra.*—Fundamental Rules, Fractions, Simple Equations, Involution and Evolution, the Calculus of Radicals, and Quadratic Equations, as given in Olney's Complete School Algebra, or an equivalent in other authors.

Geometry.—Beman and Smith's Plane and Solid Geometry, or an equivalent in other authors.

N B.—It is very desirable that High Schools whose graduates are received on diploma arrange their courses so as to include a portion of both algebra and geometry in their last preparatory year. Students who do not come from diploma schools should take a similar review if they expect to succeed in the study of mathematics in the University.

Physics.—An amount represented by Carhart and Chute's Elements of Physics. Laboratory work in physics is urgently advised, though not required; but students who have completed a course in laboratory practice may expect to derive advantage from it if they take work in the physical laboratory in the University (see page 80). It is expected that a full year will be given to preparation in physics.

Botany.—Practical exercises in the study of common plants, so conducted as to secure a familiar acquaintance with the essential facts of vegetable morphology, physiology, and relationship. The method pursued in Spalding's Introduction to Botany, or Bergen's Elements of Botany, will indicate the kind of work required, and it is expected that a half year will be given to preparation in this subject.

The examination will include,—

a. Description of indigenous species, by which the applicant's knowledge of organography and his facility in the use of the descriptive language of the science are tested.

b. Classification, including particularly the recognition at sight of important natural orders and large groups, with a particular knowledge of their botanical characters.

c. An account of physiological adaptations. The student is expected to know, from personal observation, something of the relations of flowers and insects, the dissemination of seeds, protective arrangements, and related subjects.

The limited time usually given to botany in the preparatory schools, often with insufficient material, renders it specially desirable that all who expect to continue this

subject in the University should give some additional time to it during the summer vacations, when plants are easily procured, and there is better opportunity for independent observation.

Latin.—*Grammar.*—A thorough preparation in the elements of Etymology, Syntax, and Prosody.

Prose Composition.—Applicants will be asked to translate into Latin a passage of connected English narrative, based upon some portion of the Caesar or Cicero read. As a text-book, Jones's, Collar's, or Daniell's is recommended.

Reading.—Four books of Caesar's Gallic War; six select orations of Cicero; and nine books of Virgil's *Æneid*. For books 7-9 of the *Æneid*, 1,500 lines of Ovid may be substituted. The books named may serve to indicate the amount and kind of text that may most profitably be made the basis of a thorough study in preparing for the work of the University. It should be remembered that the University desires *mastery of Latin*; the choice of selections studied is of secondary importance. Applicants for admission in Latin will be tested in the interpretation of passages of moderate difficulty outside the range of works commonly used in preparatory schools.

Four years of daily recitation should be given to the preparatory work in Latin. Special care should be taken with the training in Prose Composition. It is hoped that many schools will continue, as heretofore, to prepare students in the whole of the *Æneid*, or an equivalent. Students entering with this preparation will receive a certain amount of credit toward graduation.

The Roman method of pronouncing Latin is used at the University.

Greek.—*Grammar.*—Goodwin's or Hadley's. The inflections must be thoroughly mastered.

Prose Composition.—Jones's Exercises, with special reference to the writing of Greek with the accents, and to the general principles of syntax. Woodruff's Greek Prose Composition is taken as an equivalent.

Reading.—Three books of Xenophon's *Anabasis* and two books of Homer.

The so-called continental sound of the vowels and diphthongs, and pronunciation according to the written accents, are preferred. In preparation, Boise's First Lessons in Greek, or White's Beginner's Greek Book, will be found valuable.

Two full years of daily recitation ought to be given to preparation in Greek.

GROUP II.

In Group II the subjects and the requirements are all the same as in Group I, as described above, with the exception that, in place of two

years of Greek, two years of French or two years of German is substituted. The requirement in each of these two languages is as follows:

French.—The whole subject of French Grammar. The applicant will be expected to read at sight easy French, and to translate correctly into French simple English sentences. The first year ought to be spent chiefly on the grammar and easy reading; and the second devoted to reading good modern French, accompanied by grammatical analysis and exercises in writing. The texts read should be chiefly narrative and conversational prose; modern, rather than classic, dramas, should be read.

German.—(1) Ability to pronounce German correctly and to read it fluently with the proper intonations. (2) Thorough familiarity with the every-day facts of the grammar, to be evinced by putting illustrative English phrases and sentences into German. (3) Sufficient miscellaneous prose reading—say four hundred pages—so that the applicant will be able to construe at sight, and put into good English, a passage of moderately difficult German prose, either narrative or dialogue. (4) A careful study of one classical drama, Schiller's *Tell* being recommended.

GROUP III.

Group III is similar to Group II, except in the foreign language requirement, and in the addition of a year of United States history and civil government and a year of chemistry as a compensation for the reduction in the amount of language required.

The requirements in **English**, in **Mathematics**, in **Physics**, and in **Botany**, are the same as in Group I, described above (see page 39).

In **History** the requirement is the same as in Group I, with the addition of one year's work in United States History and Civil Government. Johnston's or McLaughlin's *History of the United States* and Fiske's *Civil Government* or Hinsdale's *American Government* are recommended as texts-books.

In **Chemistry** the requirement is intended to cover one year's work. As a text-book, Freer's *Elementary Chemistry*, or an equivalent amount of work in Remsen's *Introduction to the Study of Chemistry*, is recommended. In either case the text should be accompanied by laboratory work.

The requirement in **foreign language** may be satisfied by (1) four years of Latin; (2) four years of French; (3) four years of German; (4) two years of Latin with two years of French; (5) two years of Latin with two years of German; (6) two years of French with two years of German. The requirements in the several cases are as follows:

Latin.—The *four-year requirement* is the same as the requirement in Latin in Group I (see page 42).

The *two-year requirement* comprises Jones's *First Latin Book* or an

equivalent amount in some other introductory text-book; four books of Caesar's Gallic War; and one of the orations of Cicero.

French.—The *two-year requirement* is the same as the requirement in French in Group II above.

The *four-year requirement* comprises the *two-year requirement*, together with additional matter as follows: The third and fourth years should be spent in acquiring as great a familiarity as possible with the literature, in further practice in composition, and, where practicable, in practice in conversation. Some of the plays of Corneille, Racine, and Molière, should be read; some of the more modern plays of Hugo, Musset, and Dumas; some specimens of the best prose in history, memoirs, and essay; and some of the lyric poetry of this century. It is advised that the literature as a whole be studied in Saintsbury's or in Warren's Primer. The student ought also to be able to express himself in French grammatically and with ease on ordinary topics.

German.—The *two-year requirement* is the same as the requirement in German in Group II, above.

The *four-year requirement* comprises the *two-year requirement*, together with additional matter as follows: Five classical dramas to be selected from the works of Goethe, Schiller, and Lessing; Schiller's History of the Thirty Years' War, or an equivalent amount of other historical reading or of good modern fiction; and the whole of Harris's German Prose Composition, or some equivalent work.

GROUP IV.

Group IV is similar to Group III, except that a year of English history and a year of English literature are added as a compensation for the reduction in the amount of language required.

The requirements in **English**, in **Mathematics**, in **Physics**, and in **Botany**, are all the same as in Group I, described above (see page 39).

In **Chemistry** the requirement is the same as in Group III, above.

In **History** the requirement is the same as in Group III, above, with the addition of one year's work in English history. Ransome's History of England, Oman's History of England, Gardiner's Students' History of England, and Green's Short History of the English People, are recommended as text-books.

In **English Literature** the requirement is intended to cover one year's work. Stopford A. Brooke's English Literature (edition of 1896), or any other manual, may be used for an outline of the subject. As much time as practicable should be given to the careful reading of representative authors in each period.

The requirement in **foreign language** may be satisfied by (1) two years of Latin; (2) two years of French; or (3) two years of German. A single year in each of two languages will not be accepted as an equivalent for two years in one language. The requirements in the several cases are as follows:

Latin.—The same as the *two-year requirement* in Latin in Group III, above.

French.—The same as the requirement in French in Group II, above.

German.—The same as the requirement in German in Group II, above.

ADMISSION TO ADVANCED STANDING.

1. A student who brings a certificate of standing from an approved college or university, showing that he has satisfactorily completed at least two years of the curriculum of the institution from which he comes, may be admitted without examination to equal standing in this department of the University.

2. A student who has completed at least one year's college work in an approved college, and who brings an explicit and official certificate describing his course of study and scholarship, and testifying to his good character, may be admitted to advanced standing without examination, except such as may be necessary to determine what credit he is to receive for work done in the college from which he comes. Students coming from colleges whose requirements for admission are substantially equivalent to those of this department of the University may thus expect to be able to go on with their work without loss of standing.

3. A student who has not completed a year's college work in an approved college, but who previous to entering this department of the University, has pursued studies beyond those required for admission, may be admitted to advanced standing on passing examinations in the subjects named in some one of the groups of requirements for admission, and also in such undergraduate studies as he may ask to be credited with in advance. The examination for advanced

standing, however, may be waived in the case of studies pursued in a graduate course by graduates of a diploma school, provided the work of such graduate course has been inspected and approved by the Faculty.

4. Rules relating to admission to advanced standing:

a. Credits must be secured, and the blanks must be returned to the Registrar, before the fifteenth of December, or (if the student be matriculated after that date) before the tenth of April.

b. No credit will be given for advanced standing after the dates named in (*a*).

c. An account once closed cannot be reopened without special permission of the Faculty.

d. All students who apply for advanced standing on the conditions stated in paragraphs (1) and (2) above, must present their credentials and certificates to the Dean of the Department.

e. All students, whether candidates for a degree or pursuing select studies, who apply for advanced standing on the conditions stated in paragraph (3), must present to the Registrar a statement showing the amount of work done in the subjects in which credit is asked.

f. The application for advanced standing should be made to the Registrar immediately after matriculation; and the Registrar will furnish a blank form for presentation to the professors in charge of the several subjects named in the blank.

g. No credit will be given in any subject for high school work unless the subject has been pursued in the high school for at least one year.

ADMISSION OF STUDENTS NOT CANDIDATES FOR A DEGREE.

Persons who desire to pursue studies in this department, and do not desire to become candidates for a degree, will be admitted on the following conditions:

1. All persons under twenty-one years of age must pass the entrance examinations in some one of the four groups described on pages 39 to 45.
2. Persons over twenty-one years of age must show that they have a good knowledge of English and are otherwise prepared to pursue profitably the studies they may desire to take up.
3. Should a student who enters under the preceding provision (2) subsequently become a candidate for graduation, he must pass all the examinations for admission required of such a candidate, at least one year previous to the time when he proposes to graduate.
4. Students not candidates for a degree who wish credit for studies pursued before admission are referred to the rules relating to advanced standing given above.

TIMES OF EXAMINATIONS.

An examination for admission to the Department of Literature, Science, and the Arts, will be held on Saturday and Monday, June 26 and 28, 1897, and another beginning on Thursday, September 23, and continuing through the Friday, Saturday, Monday, and Tuesday following. The examinations will begin at nine o'clock A. M. of each day. Applicants may take their examinations at either of these times, or may take a part in June and a part in September. In either case it is particularly desired that they present themselves on the first day of the examination.

At the June examination the subjects for Saturday will be: Mathematics, Greek, Latin (Grammar and Reading), French, German, and Botany. For Monday: Latin Prose Composition, English Language (Grammar, Composition, and Rhetoric), English Literature, History and Civil Government, Physics, and Chemistry.

In September the examinations will be conducted in accordance with the following scheme:

	THURSDAY.		FRIDAY.		SATURDAY.		MONDAY.		TUESDAY.	
	A. M.	P. M.	A. M.	P. M.	A. M.	P. M.	A. M.	P. M.	A. M.	P. M.
Mathematics	9 00	2 00	9 00	2 00	----	----	9 00	2 00	9 00	----
Greek	----	----	9 00	3 00	----	----	----	----	9 00	----
Latin*	----	----	9 00†	----	----	----	9 00	----	----	----
English Language*	----	4 00	----	4 00	----	4 00	----	----	----	4 00
English Literature*	----	----	----	2 00	----	----	----	3 00	----	----
History and Civil Government*	----	----	----	----	----	2 00	----	----	----	2 00
French	----	----	----	2 00	----	2 00	----	2 00	----	----
German	9 00	----	9 00	----	9 00	----	9 00	----	9 00	----
Botany*	----	----	9 00	----	----	----	----	----	9 00	----
Physics*	----	----	11 00	----	9 00	----	----	----	----	4 00
Chemistry*	----	----	----	----	----	----	----	2 00	----	----

*Examination in writing.

†Consultation hour.

ADMISSION ON DIPLOMA.

The privilege of sending pupils for admission on diploma, originally limited to approved schools in Michigan, has been extended to include schools in other States.

On request of the school board in charge of any school, the Faculty will designate a committee to visit the school and report upon its condition. Usually the committee will consist of members of the Faculty; but whenever, owing to the great distance of a school from Ann Arbor, or for any other reason, this is impracticable, other persons may be designated to perform, under the direction of the Faculty, the work of inspection.

If the Faculty are satisfied from the report of their committee that the school is taught by competent instructors, and is furnishing a good preparation to meet the requirements for admission included in any one or more of the four groups described on pages 39 to 45, then the graduates from *the approved preparatory course or courses* will be admitted without further examination, and permitted to enter upon such undergraduate work as the preparatory studies fitted them for.* They must present to the Dean of the Department, within a year and three months after

* See paragraph on page 39 concerning the admission of graduates of an English course.

their graduation, the diplomas of their school board. They must also present certificates from the school superintendent or principal, stating that they have sustained their examinations in all the studies prescribed in some one of the groups, and are recommended for admission to the University. They will be required to appear at once in their places; otherwise they can be admitted only upon examination.

The approved schools are entitled to send their graduates on diploma for a period not exceeding three years (inclusive of the year of visitation) without further inspection, provided the Faculty are satisfied that within the period specified in each case no important changes affecting the course of study and the efficiency of the instruction make another inspection necessary. Otherwise, the Faculty reserve the right to require another inspection if the relation between the school and the University is to be maintained. Should the authorities of any school at any time within this period desire that a committee of inspection visit their school, the Faculty will always grant such a requisite if practicable.

The superintendent of each approved school is expected to send to the President, annually, at a date not later in the year than March first, a catalogue of the school; or, if no catalogue is published, he is expected to send a statement, giving the names of the teachers, the number of pupils, and a description of the course of study.

A circular giving fuller details on this subject can be obtained on application to the President of the University.

The schools named below have been approved by the Faculty as qualified to prepare students for admission on diploma in the groups indicated. As the most of these schools were approved at a time prior to the revision of the general requirements for admission which goes into effect in 1897 (see pages 39 to 45), it is possible that some readjustments will be needed when the schools are again inspected. For the purpose of the present enumeration, however, schools originally approved for the course leading to the degree of A.B. are published as approved on Group I; and, similarly, schools originally approved for courses leading to the

degrees of Ph.B., B.S., and B.L., are given as approved on Groups II, III, and IV, respectively. Unless otherwise indicated, the places named are in Michigan and the school approved is the public high school of the locality. The last column gives the year in which the term of approval expires.

	<i>Groups.</i>	
Adrian,	II, III, IV.	1897
Albion,	III, IV.	1897
Allegan,	II, III, IV.	1896
Alpena,	II, III, IV.	1898
Ann Arbor,	All Groups.	1898
Ashburnham, Mass.: Cushing Academy,	All Groups.	1897
Aurora, Ill.: East Side,	II, III, IV.	1898
West Side,	II, III, IV.	1898
Austin, Ill.,	All Groups.	1896
Battle Creek,	All Groups.	1898
Bay City,	All Groups.	1898
Benton Harbor,	All Groups.	1897
Benton Harbor: Normal and Collegiate Institute,	All Groups.	1898
Big Rapids,	II, III, IV.	1896
Big Rapids: Ferris Industrial Institute,	I, IV,	1896
Birmingham,	II, III, IV.	1896
Bloomington, Ill.,	All Groups.	1897
Buchanan,	II, III, IV.	1897
Cadillac,	II, III, IV.	1897
Calumet,	III, IV.	1896
Caro,	II, III, IV.	1896
Cassopolis,	II, III, IV.	1898
Cedar Rapids, Ia.,	II, III, IV.	1898
Champion,	III, IV.	1896
Charlotte,	All Groups.	1898
Cheboygan,	IV.	1896
Cheyenne, Wyo.,	II, III, IV.	1897
Chicago, Ill.: North Division,	All Groups.	1898
Northwest Division,	II, III, IV.	1896
South Division,	All Groups.	1896
West Division,	All Groups.	1896
Calumet,	All Groups.	1896
Englewood,	All Groups.	1896
Hyde Park,	All Groups.	1896
Jefferson High School,	All Groups.	1896
Lake,	All Groups.	1896

Lake View,	All Groups.	1896
South Chicago,	All Groups.	1896
Harvard School,	All Groups.	1898
Kenwood Institute,	All Groups.	1897
Chillicothe, O.,	II, III, IV.	1898
Cincinnati, O.: Hughes School,	All Groups.	1896
Woodward School,	All Groups.	1896
Cleveland, O.: Central High School,	All Groups.	1898
West High School,	All Groups.	1896
Coldwater,	All Groups.	1897
Corunna,	II, III, IV.	1897
Decatur,	II, III, IV.	1896
Decatur, Ill.,	All Groups.	1897
Delafield, Wis.: St. John's Academy,	All Groups.	1896
Denver, Col.,	All Groups.	1896
Detroit,	All Groups.	1898
Detroit: Detroit School for Boys,	All Groups.	1898
Dowagiac,	II, III, IV.	1896
Duluth, Minn.,	All Groups.	1896
Eaton Rapids,	II, III, IV.	1896
Elgin, Ill.,	II, III, IV.	1896
Escanaba,	III, IV.	1896
Fenton,	II, III, IV.	1897
Flint,	All Groups.	1897
Geneseo, Ill.,	II, III, IV.	1898
Golden, Col.,	III, IV.	1898
Grand Haven,	II, III, IV.	1896
Grand Rapids,	All Groups.	1898
Greenville,	II, III, IV.	1896
Hancock,	III, IV.	1896
Hastings,	II, III, IV.	1897
Hillsdale,	III, IV.	1896
Holly,	III, IV.	1897
Howell,	All Groups.	1896
Hudson: West Side,	II, III, IV.	1896
Indianapolis, Ind.,	All Groups.	1898
Indianapolis, Ind.: Classical School for Girls,	I, II.	1898
Industrial Training School,	II, III, IV.	1898
Ionia,	All Groups.	1898
Iron Mountain,	III, IV.	1896
Ishpeming,	II, III, IV.	1896
Ithaca,	III, IV.	1897

Jackson: East Side,	II, III, IV.	1898
West Side,	All Groups.	1898
Joliet, Ill.,	All Groups.	1897
Jonesville,	II, III, IV.	1896
Kalamazoo,	All Groups.	1897
Kalamazoo: Michigan Female Seminary,	II, IV.	1897
Kankakee, Ill.,	IV.	1896
Kansas City, Mo.,	All Groups.	1896
Kendallville, Ind.,	IV.	1896
La Grange, Ill. (Lyons township),	All Groups.	1896
Lake Linden,	II, III, IV.	1897
Lansing,	All Groups.	1896
Lapeer,	All Groups.	1897
La Porte, Ind.,	II, III, IV.	1896
Ludington,	All Groups.	1896
Manistee,	All Groups.	1898
Mansfield, O.,	All Groups.	1897
Marine City,	II, III, IV.	1897
Marinette, Wis.,	All Groups.	1898
Marquette,	All Groups.	1897
Marshall,	All Groups.	1896
Mason,	II, III, IV.	1898
Maywood, Ill.,	II, III, IV.	1897
Menominee,	All Groups.	1898
Michigan City, Ind.,	All Groups.	1896
Midland,	III, IV.	1896
Moline, Ill.,	All Groups.	1898
Monroe,	All Groups.	1897
Mt. Clemens,	II, III, IV.	1896
Mt. Pleasant,	II, III, IV.	1897
Muskegon,	All Groups.	1898
Negaunee,	II, III, IV.	1896
Nashville,	III, IV.	1896
Niles,	II, III, IV.	1896
Norway,	IV.	1896
Oak Park, Ill.,	All Groups.	1896
Omaha, Neb.,	All Groups.	1896
Orchard Lake: Michigan Military Acad.,	All Groups.	1898
Ottawa, Ill.,	All Groups.	1898
Owosso,	II, III, IV.	1898
Paw Paw,	All Groups.	1898
Peoria, Ill.,	All Groups.	1897
Petoskey,	II, III, IV.	1896

Plainwell,	III, IV.	1897
Pontiac,	All Groups.	1897
Port Huron,	All Groups.	1898
Portland,	II, III, IV.	1896
Rockford, Ill.,	All Groups.	1897
Romeo,	All Groups.	1896
Saginaw: East Side,	All Groups.	1896
West Side,	All Groups.	1897
St. Clair,	II, III, IV.	1896
St. Johns,	II, III, IV.	1896
St. Joseph,	II, III, IV.	1898
St. Louis,	II, III, IV.	1896
St. Louis, Mo.: Smith Academy,	All Groups.	1898
Sault Ste. Marie,	III, IV.	1896
Schoolcraft,	II, III, IV.	1896
South Bend, Ind.,	All Groups.	1898
Spring Arbor: Spring Arbor Seminary,	I, II.	1897
Springfield, Ill.,	All Groups.	1898
Sturgis,	IV.	1897
Taylorville, Ill.,	III.	1897
Tecumseh,	II, III, IV.	1896
Three Rivers,	All Groups.	1897
Traverse City,	II, III, IV.	1897
Troy, O.,	All Groups.	1898
Union City,	All Groups.	1896
Vassar,	IV.	1897
Washington, D. C.,	All Groups.	1896
Waukegan, Ill.,	II, III, IV.	1896
West Bay City,	All Groups.	1897
West Des Moines, Ia.,	All Groups.	1896
Ypsilanti,	All Groups.	1898

Total, 152 Schools.

COURSES OF INSTRUCTION.

[For courses in the Department of Medicine and Surgery and in the Department of Law which are open to students in the Department of Literature, Science, and the Arts, see pages 99 and 101.]

The Courses of Instruction are subject to change from time to time. At the opening of each academic year, a special Announcement is issued, giving full information concerning the courses offered for the year, and the days,

hours, and places of lecture, recitation, and laboratory work. From the courses offered in the various branches of learning, the student is allowed to make his choice, under regulations prescribed by the Faculty (see page 110).

The courses announced for the year 1896-97 are described below. The amount of credit towards graduation assigned to each course is indicated by the expressions *one hour*, *two hours*, etc., an *hour of credit* being given for the satisfactory completion of work equivalent to one exercise a week during one semester. Lectures and recitations are usually one hour in length, but in laboratory work, drawing, and other practical exercises, a longer attendance is required in order to secure an hour of credit.

For convenience of reference a few courses are included that are not ordinarily open to undergraduates, and for some of these no hours of credit are given.

GREEK.*

All students except those who are admitted to advanced standing, are required to pursue Course 1 before passing on to the other courses. The Teachers' Courses are open only to those who have completed Courses 1, 2, 3, 4, and either 5*a* or 5*b*, and at least five hours of elective work. Courses 7*a* and 13 are primarily for graduate students. Courses 6*a*, 6*b*, 8, 9, 10, 11, 12, 15, and 16, are advanced electives for undergraduates, but may be taken with advantage by graduates.

FIRST SEMESTER.

1. Select Orations of Lysias; Xenophon's Symposium. Three sections. *Four hours.* Professor PATTENGILL and Dr. WAIT.
4. Demosthenes, De Corona; Studies in the Attic Orators. Two sections. *Four hours.* Professor PATTENGILL and Dr. WAIT.
- 6*a*. Teachers' Course. Lectures on Greek Grammar. *Two hours.* Professor D'OOGHE.

***School of Classical Studies at Athens.**—This University, through the generosity of some of its friends, is a contributor to the support of the American School of Classical Studies at Athens. The School affords facilities for archæological and classical investigation and study in Greece, and graduates of the Department of Literature, Science, and the Arts of this University are entitled to all its advantages without expense for tuition. Professor M. L. D'Ooge was director of the School for 1886-87.

- 7a. Seminary in Tragedy. Several of the plays of Euripides are studied with special reference to the principles of Greek Dramatic Art. *Three hours.* Professor D'OOGÉ.
- Course 7a is open to undergraduates who receive special permission.
8. History of Greek Art from the Beginning to the Roman Period. Gardner's Handbook of Greek Sculpture and Collignon's Manual of Greek Archæology are made the basis of a more general study. *Three hours.* Professor D'OOGÉ.
11. Pindar, the Olympian and Pythian Odes. *Two hours.* Professor D'OOGÉ.
12. Thucydides, Books VII and VIII. *Three hours.* Professor PATTENGILL.

SECOND SEMESTER.

2. Homer, Odyssey. Secs. I and II, selections from Books I–XII. Sec. III, Books XIII–XXIV. *Three hours.* Secs. I and II, Dr. WAIT. Sec. III, Professor PATTENGILL.
- Sec. III is for students who have read one or more books of Homer in their preparatory course.
3. History of Greek Literature. Two sections. *One hour.* Dr. WAIT.
5. Dramatic Poetry. This course may be elected as 5a or 5b.
- 5a. Sophocles, Oedipus Tyrannus; Aristophanes, Wasps. *Four hours.* Professor PATTENGILL.
- 5b. Sophocles, Electra; Aristophanes, Frogs. *Four hours.* Professor PATTENGILL.
- 6b. Teachers' Course. Greek Writing. *Two hours.* Dr. WAIT.
9. The Bucolic Poets. This course may be elected as 9a or 9b.
- 9a. Theocritus. *Three hours.* Professor PATTENGILL.
- 9b. Bion and Moschus. *One hour.* Professor PATTENGILL.
10. Studies in Plato's Republic. *Two hours.* Professor D'OOGÉ.
13. Graduate Seminary. Introduction to Greek Epigraphy and Reading of Inscriptions. Dr. WAIT.
15. Greek Antiquities. Lectures on the Private Life of the Ancient Athenians. Illustrated by stereopticon views. *One hour.* Professor D'OOGÉ.
16. Modern Greek. Selections from the best modern Greek writers. *Two hours.* Professor D'OOGÉ.

LATIN.

Courses 1 and 2 must precede all the rest.

In order to increase the range of work offered to advanced students, several of the courses in Latin are given in alternate years, new courses being introduced as opportunity is thus afforded.

Students who wish a recommendation to teach Latin must satisfactorily complete Courses 7a, 10, 11, 12, 21, and 22.

Courses 1, 2, 3, 4, 5, 6, and 7, are intended primarily for undergraduates; Courses 7a, 8a, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20, 21, and 22 are for graduates and undergraduates; Courses 23, 24, 27, 28, 29, and 30 are primarily for graduates, though undergraduates of exceptional ability are sometimes admitted to them by special permission; Courses 25 and 26 are for graduate students exclusively.

FIRST SEMESTER.

1. Cicero. De Senectute. De Amicitia. Latin writing. Five sections. *Three hours.* Assistant Professor LEASE, Mr. MEADER, Mr. JEFFERS, and Mr. STUART.
3. Horace. Selections from the Odes, Satires, and Epistles. Studies in Roman Antiquities. Two sections. *Four hours.* Assistant Professor DRAKE and Mr. MEADER.
- [5. The Letters of Pliny. Interpretation of Selected Letters, and lectures. *Three hours.* Professor ROLFE.
Course 5 is omitted in 1896-97.]
- 5a. Roman Comedy. Lectures upon the history of the Roman Drama, the meters of Plautus and Terence, and peculiarities of early Latin Syntax. Special study of the Miles Gloriosus. *Three hours.* Assistant Professor LEASE.
7. The Annals of Tacitus. Interpretation of Selections. *Three hours.* Assistant Professor DRAKE.
- 7a. Introduction to Roman Constitutional Antiquities. Lectures and reports on collateral readings. *Two hours.* Assistant Professor DRAKE.
- [9. Introduction to Classical Philology. Lectures. *Three hours.* Professor KELSEY.
In Course 9, a brief outline of the history and present condition of classical studies is given, followed by an extended discussion of the methods employed in classical philology. Attention is also given to the bibliography of the subject.
Course 9 is omitted in 1896-97.]
11. Latin Writing. Two sections. *Two hours.* Assistant Professor LEASE.
Course 11 is introductory to Course 12. The principal aim is to secure correctness of expression and a feeling for idiom. The course may profitably be taken by students whose work in the Latin writing of Course 1 has been of high grade.
13. Lucretius. Interpretation of the text, and lectures. *Three hours.* Professor KELSEY.

- [15. Seneca. Selections from the Epistles. *Three hours.* Professor KELSEY.
Course 15 is omitted in 1896-97.]
- [17. Latin Masterpieces. Study of selected masterpieces of Roman Literature. *Three hours.* Professor ROLFE.
Course 17 is omitted in 1896-97.]
21. Teachers' Course. Interpretation of Caesar's Gallic War, with studies in the syntax and military antiquities. *Two hours.* Professor KELSEY.
Course 21 is open only to those who receive special permission.
The exercises are not open to visitors.
23. Reports on the Current Literature of Latin Philology. *Two hours.* Professor KELSEY and Assistant Professor DRAKE.
Course 23 is intended primarily for graduate students.
25. Seminary. Critical study of Lucretius. Professor KELSEY.
Course 25 is open to graduate students only.
27. Study of Roman Coins. Professor KELSEY.
Course 27 is open to graduate students only.
- [29. Latin Grammar. Lectures. *Three hours.* Professor ROLFE.
Course 29 is omitted in 1896-97.]

SECOND SEMESTER.

2. Selections from Catullus. Livy: Book I. The Medea of Seneca. Four sections. *Four hours.* Mr. MEADER, Mr. JEFFERS, and Mr. STUART.
4. Roman Literature. Selections from representative authors. Four sections. *Four hours.* Assistant Professors DRAKE and LEASE, and Mr. MEADER.
6. Cicero's Tusculan Disputations. Interpretation of Selections, and lectures. *Three hours.* Assistant Professor DRAKE.
- 6a. Christian Latin. Selections from early Christian writers, with lectures upon the Christian Latin Literature. *Three hours.* Assistant Professor LEASE.
- 8a. The Institutes of Gaius and Justinian. Interpretation of the text, with special study of the technical terms of the Roman Law. *Two hours.* Mr. MEADER.
- [10. Introduction to Roman Archæology. Elements of Roman Archæology; topography and architectural history of Rome; sculpture and painting in the Roman period. Lectures. *Four hours.* Professor KELSEY.
Course 10 is omitted in 1896-97.]
12. Latin Writing. Advanced course. Two sections. *Two hours.* Assistant Professor LEASE.

In Course 12 attention is given not only to correctness of expression, but also to matters of style and the finer distinctions of the language. It is limited to those whose work in Course 11 has been of a very high grade.

- [14. Latin Grammar. Lectures. *Four hours.* Professor ROLFE.
Course 14 is omitted in 1896-97.]
- 16. Latin Inscriptions. Reading of inscriptions of different periods from squeezes and fac-similes. Interpretation of inscriptions with special reference to the study of Roman life and society. *Three hours.* Professor KELSEY.
- [18. Ovid. Fasti. Studies in Roman topography and mythology.
Three hours. Professor ROLFE.
Course 18 is omitted in 1896-97.]
- 20. Historical Pro-seminary. *Scriptores Historiae Augustae.* *Two hours.* Assistant Professor DRAKE.
- 22. Teachers' Course. Study of Virgil. *Three hours.* Professor KELSEY.
- 24. Reports on the Current Literature of Latin Philology. Continuation of Course 23. *Two hours.* Professor KELSEY and Assistant Professors DRAKE and LEASE.
- 26. Seminary. Critical study of Lucretius. Continuation of Course 25. Professor KELSEY.
Course 26 is open to graduate students only.
- 28. Study of Roman Coins. Professor KELSEY.
Course 28 is open to graduate students only.
- [30. The Italic Dialects. Continuation of Course 29. *Three hours.* Professor ROLFE.
Course 30 is omitted in 1896-97.]

SANSKRIT.

Before beginning the study of Sanskrit, the student should have pursued courses in Greek and Latin for a least four semesters or, instead of either Greek or Latin, Germanics of the early period.

FIRST SEMESTER.

- 1. Beginners' Course. Grammar, and exercises in translation and composition. Text-books: Perry's Sanskrit Primer and Whitney's Grammar. *Three hours.* Dr. WAIT.

SECOND SEMESTER.

- 2. Interpretation of the prose selections contained in Lanman's Sanskrit Reader, with elementary studies in the comparative morphology of the more important cognate languages. *Three hours.* Dr. WAIT.

HELLENISTIC GREEK.

FIRST SEMESTER.

1. New Testament. Acts of the Apostles, including grammatical study of the peculiarities of Hellenistic Greek and historical introduction to the book and the Apostolic period. Text-books: Westcott and Hort's Greek New Testament, revised edition with introduction by Ph. Schaff; Thayers's Winer's New Testament Grammar; Thayer's Greek-English Lexicon. *Two hours.* Professor CRAIG.

SECOND SEMESTER.

2. Septuagint. Introductory lectures with selected readings from the historical and prophetic books. Apocrypha—Maccabees, Books I and II. Text-books: Vetus Testamentum Graece by L. Van Ess, or the Old Testament in Greek by H. B. Swete, Vols. I–III. Grammar and Lexicon as in Course I, and Liddell and Scott's Lexicon. *Two hours.* Professor CRAIG.

HEBREW.

Graduate students who wish to pursue Hebrew as one of the subjects leading to a higher degree, are required to complete Courses 1 and 2, or an equivalent, before entering on the advanced work.

FIRST SEMESTER.

1. Genesis. Baer and Delitzsch's Text. Harper's Elements of Grammar; Craig's Hebrew Word Manual. *Three hours.* Professor CRAIG.
3. Prophetic Literature: Amos and Isaiah. Study of the nature and content of prophecy in its literary, historical, and ethical aspects. Text-books: Hebrew Bible, Driver's Hebrew Moods and Tenses. *Two hours.* Professor CRAIG.

SECOND SEMESTER.

2. Deuteronomy, Joshua, I Samuel, Ruth, Jonah. Theile's Biblia Hebraica. Davies's Lexicon. *Three hours.* Professor CRAIG.
4. The Book of Job, including study of the literary structure and critique of the dominant ideas. Text-books: Baer and Delitzsch's Text and Haupt's Polychrome Edition (text by Siegfried). *Two hours.* Professor CRAIG.

HEBREW LITERATURE.

FIRST SEMESTER.

1. Lectures. Introduction to the study of the historical and prophetic books of the Old Testament, with special reference to

the last results of Assyrian and Babylonian research. The lectures are largely historical and treat also of the origin and character of Hebrew institutions. *Two hours.* Professor CRAIG. Course 1 is open to all students. No knowledge of the Semitic languages is required.

ASSYRIAN.

FIRST SEMESTER.

1. Introduction to Easy Historical Inscriptions from the Ninth Century, B. C., with study of the Grammar. Text-book: Delitzsch's *Assyrische Lesestücke*, dritte Auflage. *Three hours.* Professor CRAIG.
2. Seminar in Sumerian. *Two hours.* Professor CRAIG.
- 3a. The Babylonian Stories of Creation; the Deluge and the War of Marduk against Tiamat; lectures on the Cosmology of The Babylonians; Inscription of Tiglathpileser I, cir. 1120 B. C. *Two hours.* Professor CRAIG.

SECOND SEMESTER.

2. Historical Inscriptions. Selections from the Cuneiform Inscriptions of Western Asia (R. I—V). Professor CRAIG.
4. Religious Literature. Texts: King's "The Prayers of the Lifting up of the Hand" and Craig's "Religious Texts." Professor CRAIG.

ARABIC.

FIRST SEMESTER.

1. Introductory Course. Grammar and reading. Text Books: Socin's *Arabic Grammar* (English ed.) and Brünnow's *Chrestomathy*. *Two hours.* Professor CRAIG.
2. Selected Suras from the Quran with introductory lectures on the life of Muhammed and Muhammedanism. *Two hours.* Professor CRAIG.

FRENCH.

Courses 1 and 2 must precede all others. Students required to take more than eight hours of French are allowed to select from other courses, subject to the approval of the instructor.

FIRST SEMESTER.

1. Beginners' Course. Grammar and easy reading. Six sections. *Four hours.* Assistant Professor LEVI, Mr. EFFINGER, and Mr. FRANÇOIS.
3. Composition and Translation from English into French. *Three hours.* Mr. FRANÇOIS.

- Course 3 is intended for students who want a practical knowledge of the language; it is required of all who intend to take a Teacher's Diploma in French.
6. Critical Prose Writing of the Nineteenth Century. Sainte-Beuve; Brunetière; Taine. *Two hours.* Professor WALTER.
 8. French Classic Dramas. Two sections. *Three hours.* Assistant Professor LEVI and Mr. EFFINGER.
 13. French Lyrics. *La Lyre Française.* *Three hours.* Assistant Professor DE PONT.
Course 13 is open only to students who have had fourteen hours of French.
 14. Seminary. *Two hours.* Professor WALTER.
Course 14 is open only to those who receive special permission.
 16. "Lectures Courantes" and Conversation. *Three hours.* Assistant Professor DE PONT.
 18. Study of Old French. *Two hours.* Assistant Professor LEVI.
 20. Modern French Prose. Musset; Mérimée; Sand. Two sections. *Two hours.* Professor WALTER and Assistant Professor LEVI.
Course 20 is not open to students who have had more than eight hours' credit in French.
 22. Dramatists of the Eighteenth Century, from the Classical to the Romantic Schools. Regnard; Marivaux; Destouches; etc. *Three hours.* Assistant Professor DE PONT.
Course 22 is open to students who have had Course 8 and a three-hour course in addition.
 24. French Literature of the Sixteenth Century. Lectures, recitations, and essays. *Two hours.* Professor WALTER.
Course 24 is open only to students who receive special permission.

SECOND SEMESTER.

2. Modern Prose and Plays. Grammar continued. Six sections. *Four hours.* Assistant Professor LEVI, Mr. EFFINGER, and Mr. FRANÇOIS.
4. Scientific Reading. *La Nature.* *Four hours.* Assistant Professor DE PONT.
5. Advanced Composition. Continuation of Course 3. *Three hours.* Assistant Professor DE PONT.
7. Classic French Prose. Pascal; Bossuet; La Bruyère; Sévigné. Two sections. *Two hours.* Professor WALTER and Mr. EFFINGER.
9. Montaigne. *Two hours.* Professor WALTER.
10. Poets and Poetry of the Nineteenth Century. *Two hours.* Assistant Professor DE PONT.

Course 10 is open only to students who have taken Course 13, or who receive special permission.

11. Rousseau, *Contrat Social* and Selections. *Three hours.* Professor WALTER.

Course 11 is open only to those who receive special permission.

15. Seminary. Victor Hugo. *Dramas.* *Two hours.* Assistant Professor DE PONT.

Course 15 is conducted in French, and is open only to students who have had Course 12 or its equivalent.

17. Teachers' Course. *Two hours.* Professor WALTER.

Course 17 is open only to those who receive special permission.

21. Contemporary French Drama. *Two hours.* Mr. FRANÇOIS.
23. Study of old French. *Two hours.* Assistant Professor LEVI.
25. French Literature of the Seventeenth Century. *Two hours.* Assistant Professor LEVI.
27. Didactic, Narrative, and Satirical Poetry. Regnier; Boileau; Voltaire. *Two hours.* Assistant Professor LEVI.

ITALIAN.

FIRST SEMESTER.

2. Continuation of Course 1. Ariosto or Tasso. *Two hours.* Assistant Professor LEVI.
4. Dante, *La Vita Nuova.* *One hour.* Professor WALTER.

SECOND SEMESTER.

1. Grandgent's Italian Grammar. Easy Prose. *Three hours.* Assistant Professor LEVI.
Course 1 is open only to those who have completed Courses 1 and 2 in French.
3. Dante, *Divina Commedia.* Lectures and recitations. *Two hours.* Professor WALTER.

SPANISH.

FIRST SEMESTER.

1. Manning's or Edgren's Spanish Grammar. Easy Prose. *Two hours.* Assistant Professor LEVI.
Course 1 is open only to those who have completed Courses 1 and 2 in French.
3. Calderon, *La Vida es Sueño.* *Two hours.* Professor WALTER.

SECOND SEMESTER.

2. Continuation of Course 1. *Two hours.* Assistant Professor LEVI.
4. Cervantes, *Don Quixote.* *One hour.* Professor WALTER.

GERMAN.

The required work in German is all included in Courses 1, 2, 3, 4, which should be taken in the order of the numerals. The student must take, for the elementary requirement of eight hours, Courses 1 and 2; for the advanced requirement of eight hours, one of the options designated 3*a*, 3*b*, etc., and one of the options designated 4*a* or 4*b*. The numbers above 4 designate advanced electives which can be taken only by special permission.

FIRST SEMESTER.

1. Beginners' Course. Thomas's German Grammar and a German Reader. Five sections. *Four hours.* Dr. MENSEL, Mr. HILDNER, Mr. DIEKHOFF, and Mr. LESSING.
3. Plays of Schiller, with collateral prose reading and practice in writing German. This course may be elected as 3*a*, 3*b*, or 3*c*.
 - 3*a*. Wilhelm Tell. Two sections. *Four hours.* Assistant Professor WINKLER and Mr. DIEKHOFF.
 - 3*b*. Jungfrau von Orleans. Two sections. *Four hours.* Dr. MENSEL.
 - 3*c*. Maria Stuart. Three sections. *Four hours.* Assistant Professor WINKLER, Mr. HILDNER, and Mr. DIEKHOFF.
5. Third year Electives. This course may be elected as 5*a*, 5*b*, etc.
 - 5*a*. The First Part of Goethe's Faust. Thomas's edition. *Four hours.* Assistant Professor WINKLER.
 - 5*b*. Goethe's Götz von Berlichingen and Leiden des jungen Werthers, and Schiller's Räuber. *Three hours.* Professor HENCH.
 - 5*c*. Schiller's Wallenstein, with extracts from his Geschichte des dreissigjährigen Kriegs. *Three hours.* Dr. MENSEL.
 - 5*d*. Schönbach's Ueber Lesen und Bildung. *Two hours.* Mr. DIEKHOFF.
 - 5*e*. Schiller's Philosophic Writings. *Two hours.* Assistant Professor WINKLER.
 - 5*f*. Scientific Prose. *Two hours.* Mr. HILDNER.
 - 5*g*. Advanced German Composition. Two sections. *Two hours.* Dr. MENSEL.
7. Elementary Middle High German. Bachmann's Lesebuch and Paul's Grammatik. *Two hours.* Dr. MENSEL.
9. Modern German Grammar from an Historical and Comparative Point of View. I. Phonology and Morphology. *Three hours.* Professor HENCH.
10. History of German Literature. I. From the Earliest Times to the End of the Middle Ages. Lectures and readings from Max Müller's German Classics. *Three hours.* Professor HENCH.

64 *Department of Literature, Science, and the Arts.*

13. German Romanticism. Lectures and assigned readings. *Two hours.* Assistant Professor WINKLER.

SECOND SEMESTER.

2. German Grammar Continued. Reading of easy narrative prose and modern dialogue; Storm's *Immensee*; Riehl's *Fluch der Schönheit*; and Freytag's *Journalisten*. Five sections. *Four hours.* Dr. MENSEL, Mr. HILDNER, Mr. DIEKHOFF, and Mr. LESSING.
4. Plays of Goethe and Lessing, with collateral prose reading and practice in writing German. This course may be elected as 4a or 4b.
- 4a. Goethe's *Egmont*. Two sections. *Four hours.* Assistant Professor WINKLER and Dr. MENSEL.
- 4b. Lessing's *Minna von Barnhelm* and *Emilia Galotti*. Three sections. *Four hours.* Mr. HILDNER, Mr. DIEKHOFF, and Mr. LESSING.
6. Third Year Electives. This course may be elected as 6a, 6b, etc.
- 6a. The Second Part of Goethe's *Faust*, Schröder's edition. *Three hours.* Assistant Professor WINKLER.
- 6b. Goethe's *Iphigenie*, Tasso, and *Hermann und Dorothea*. *Three hours.* Mr. DIEKHOFF.
- 6c. Lessing's *Nathan der Weise*, *Anti-Göze*, and *Erziehung des Menschengeschlechts*. *Three hours.* Professor HENCH.
61. *Laokoon*. A study of Lessing's essay with comparison of the critiques by Herder and Goethe. *Two hours.* Assistant Professor WINKLER.
62. Bismarck's *Reden und Briefe*. *Two hours.* Dr. MENSEL.
63. Scientific Prose. *Two hours.* Mr. HILDNER.
64. Advanced German Composition. Continuation of Course 54. Two sections. *Two hours.* Dr. MENSEL and Mr. DIEKHOFF.
8. Advanced Middle High German. *Nibelungenlied* and *Gudrun*. *Two hours.* Dr. MENSEL.
10. Modern German Grammar from an Historical and Comparative Point of View. II. Syntax. *Three hours.* Professor HENCH.
12. History of German Literature. II. Modern Period. *Three hours.* Assistant Professor WINKLER.
14. German Romanticism. Continuation of Course 13. *Two hours.* Assistant Professor WINKLER.
18. Old High German. Introductory course. Lectures and readings from Braune's *Althochdeutsches Lesebuch*, 3rd ed. *Two hours.* Professor HENCH.

GOTHIC.

FIRST SEMESTER.

1. Lectures on Phonology and Morphology, and Reading of the Gospels. Text-book: Braune's *Gotische Grammatik*, 4th ed. (or Balg's translation, 2nd ed.). *Two hours.* Professor HENCH.

SECOND SEMESTER.

2. Epistles and Skeireins as contained in Heyne's *Ulphilas*, 9th ed., or Balg's *First Germanic Bible*. Lectures on Historical German Grammar based on Streitberg's *Urgermanische Grammatik*. *Two hours.* Professor HENCH.

SCANDINAVIAN.

SECOND SEMESTER.

1. Old Norse. Introductory course. Text-books: Holthausen's *Altisländisches Elementarbuch*, Noreen's *Altisländische and Altnorwegische Grammatik*, 2nd ed. (for reference), *Gunnlaugssaga Ormstungu*, ed. Mogk, and *Volsungasaga*, ed. Ranisch. *Two hours.* Professor HENCH.

ENGLISH AND RHETORIC.

Courses 11, 12, and 14 are conducted on the seminary plan, the class being divided into small sections for the presentation of theses and reports for extempore discussion and conference. These courses are designed for advanced students only, and are usually taken by students in their last year of residence at the University.

Courses 7, 8, 9, 10, 10*a*, 11, 12, 14, 15*a*, 17, 19, and 20, will ordinarily be found suitable for graduate students as well as for undergraduates. In the case of students who have taken these courses for their first degree, special advanced courses are provided for graduate study, after conference with the candidate. Some of the courses given in recent years are the following: The Development of the English Novel; The English Satirists of the Seventeenth and Eighteenth Centuries; The Romantic Revival in England at the close of the last century; The Pre-Shakespearean Drama in England; Shakespeare's Histories.

Students who desire to take a Teacher's Diploma in English will be expected to complete Courses 7, 10, 10*a*, 11, and 12.

FIRST SEMESTER.

1. Paragraph-Writing. Seven sections. *Two hours.* Professor SCOTT, Mr. GRAY, and Mr. STRAUSS.

In the first semester Course 1 (except one section, which is arranged for engineering students) is designed especially for candidates for the degrees of A.B. and Ph.B.; in the second semester, for all other students.

- 1a. Theme-Writing. *Two hours.* Mr. STRAUSS.

Course 1a is open to those who have passed Course 1.

2. Science of Rhetoric. Essays in description and narrative. Four sections. *Three hours.* Professor SCOTT.

Course 2 must be preceded by Course 1, and by Course 1 or Course 2 in philosophy. Course 1a is also recommended.

- 2a. Essays. Four sections. *Two hours.* Professor SCOTT.

Course 2a is intended for students who, having passed Course 2 in the second semester, desire to continue their work in composition. It is open only to those who receive special permission.

3. Old English (Anglo-Saxon) for Beginners. Two sections. *Two hours.* Professor HEMPL.

5. English Literature. Late Middle and Early Modern English (fourteenth and fifteenth centuries), with especial reference to Chaucer. Professor HEMPL.

Course 5 must be preceded by Course 1. Courses 3 and 4 are also recommended.

7. Teachers' Course. Historical English Grammar. *Two hours.* Professor HEMPL.

9. Old-English Syntax. *Two hours.* Professor HEMPL.

Course 9 must be preceded by Course 3.

10. Principles of Literary Criticism. Lectures and discussions. *One hour.* Professor DEMMON.

Course 10 is especially designed to accompany Course 11.

11. English Literature Seminary. Study of masterpieces; More's Utopia; Bacon's Essays; Milton's Areopagitica; Carlyle's Sartor Resartus; George Eliot's Silas Marner; Spenser's Faery Queen, Book 1; Shakespeare's Sonnets; Milton's Paradise Lost; Dryden's Absalom and Achitophel; Wordsworth's Excursion; Tennyson's Princess; Browning's Soul's Tragedy; Swinburne's Atalanta in Calydon. Four sections. *Two hours.* Professor DEMMON.

Course 11 must be preceded by Courses 2 and 5.

21. Development of Rhetorical Theory. An historical and comparative study of the growth of rhetorical theory from Aristotle to the present time. *Two hours.* Professor SCOTT.

Course 21 is open only to graduate students.

22. Studies in the text of Shakespeare. *Two hours.* Professor DEMMON.

Course 22 is designed primarily for graduate students. The aim is to illustrate the methods of textual study as applied to a play like Hamlet, and the difficulties to be overcome in establishing a text. The McMillan Shakespeare Library affords a very full apparatus for these studies.

SECOND SEMESTER.

1. Paragraph-Writing. Five sections. *Two hours.* Mr. GRAY and Mr. STRAUSS.
See note to Course 1 in first semester. Three of the sections are designed for engineering students.
- 1a. Theme-Writing. *Two hours.* Mr. STRAUSS.
See note to Course 1a in first semester.
2. Science of Rhetoric. Essays in exposition and argument. Four sections. *Three hours.* Professor SCOTT.
See note to Course 2 in first semester.
- 2b. Essays. Four sections. *Two hours.* Professor SCOTT.
Course 2b is intended for students who, having passed Course 2 in the first semester, desire to continue their work in composition. It is open only to those who receive special permission.
4. English Literature. Transition and Early Middle English (twelfth and thirteenth centuries). *Two hours.* Professor HEMPL.
Course 4 must be preceded by Course 3.
6. English Literature. Modern English. *Three hours.* Professor HEMPL.
Course 6 must be preceded by Course 5. A manual is used to give a general survey of the subject; but special attention is given to each author or period by certain members of the class, each member making about half a dozen special studies and reports.
8. Old-English (Anglo-Saxon) Poetry. *Three hours.* Professor HEMPL.
- 10a. Principles of Literary Criticism. Lectures and discussions. *One hour.* Professor DEMMON.
Course 10a must be preceded by Course 10. It is designed to accompany Course 12.
12. Shakespeare Seminary. Plays selected: A Midsummer Night's Dream; The Merchant of Venice; As You Like It; Twelfth Night; The Tempest; Richard III; the two parts of Henry IV; Henry V; Hamlet; Othello; King Lear; Macbeth; Coriolanus. Four sections. *Two hours.* Professor DEMMON.
Course 12 must be preceded by Course 11.
14. American Literature Seminary. Authors studied: Irving, Poe, Hawthorne, Bryant, Longfellow, Emerson, Thoreau, Bayard Taylor, Whittier, Holmes, Lowell, Howells, and James. *Two hours.* Professor DEMMON.

Course 14 must be preceded by Course 11. Representative works of the authors named are studied and compared with masterpieces of British authors, and an attempt made to discover the distinctively American element.

15. Principles of Style. Inductive study of masterpieces of English prose, with a view to verifying rhetorical principles. Lectures, readings, and discussions. *Two hours.* Professor SCOTT.

Course 15 is open to those who have taken Course 2.

17. Principles of Linguistic Science. *Two hours.* Professor HEMPL. In Course 17, the general principles of philology are studied with the aid of a text-book and lectures. The course is intended for students of either ancient or modern languages.

19. Spoken English, with special reference to American English. *Two hours.* Professor HEMPL.

In Course 19 a study is made of colloquial English as distinguished from the English of books and artificial speech, and an attempt is made to settle some of the important facts as to the fortunes of English speech in our country.

- [20. Old-English Phonology and Morphology. *Three hours.* Professor HEMPL.

Course 20 must be preceded by Course 3. It is omitted in 1896-97.]

21. Development of Rhetorical Theory. An historical and comparative study of the growth of rhetorical theory from Aristotle to the present time. *Two hours.* Professor SCOTT.

Course 21 is open only to graduate students.

ELOCUTION AND ORATORY.

For information regarding the University oratorical associations, and the annual contests in oratory and debate, which afford opportunity for a practical application of the principles taught, see page 33.

FIRST SEMESTER.

1. Elocution. Exercises in voice culture, breathing, position, and technique of gesture; pronunciation and emphasis; the Rush and Delsarte philosophies; elements of Quality and Force of voice, with their applications. *Two hours.* Professor TRUEBLOOD.
3. Study of Great Orators: Ancient Orators, and Modern Orators of Continental Europe. Lectures on methods of public address and sources of power; study of representative selections. *Two hours.* Professor TRUEBLOOD.

Course 3 must be preceded by Courses 1 and 2; and by Courses 1 and 2 in English.

5. Oral Discussions. Application of the principles of formal logic and elocution in debating leading questions of the day. Designed to develop readiness of extemporization. Preparation of briefs. Recommended to those who desire to enter the inter-collegiate debates. *Two hours.* Professor TRUEBLOOD.
Course 5 must be preceded by Courses 1 and 2, by Courses 1 and 2 in English, and by a course in elementary logic.

SECOND SEMESTER.

2. Elocution. Exercises in vocal culture continued; elements of Pitch and Time with illustrations; study and application of the principles of action; delivery of short extracts from masterpieces of the orators. *Two hours.* Professor TRUEBLOOD.
Course 2 must be preceded by Course 1.
4. Study of Great Orators: English and American Orators. Continuation of Course 3. Lectures on qualifications of the orator; comparison of methods of great orators; construction of a speech. *Two hours.* Professor TRUEBLOOD.
Course 4 must be preceded by Courses 1, 2, and 3; and by Courses 1 and 2 in English.
- 6a. Shakespearian Reading. Critical study and reading of two of Shakespeare's plays, a comedy and a tragedy. *Two hours.* Professor TRUEBLOOD.
Course 6a must be preceded by Courses 1 and 2.

MUSIC.

The courses in music are open to students who evince sufficient musical ability to pursue them with profit. Courses 1 and 2 are introductory to the technical and critical courses, and no advanced credit will be allowed for them. Courses 1a and 2a are open to students who possess good voices and can read readily at sight; students electing these courses are required to sing at the Vesper Services from the beginning of the *first semester* to the spring vacation. Courses 3 to 8 are technical and represent four years' work. Course 10a is intended primarily for graduate students, but is open to undergraduates who are fitted to do advanced work. Courses 9a, 9b, 11a, and 11b, are open to students who wish to study the historical development of music, as well as its significance as an art.

FIRST SEMESTER.

1. Fundamental Principles of Musical Science. *Two hours.* Professor STANLEY.
- 1a. Choral Music. *Two hours.* Professor STANLEY.

3. Science of Harmony. *Two hours.* Professor STANLEY.
- 5a. Simple Counterpoint. *Two hours.* Professor STANLEY.
- 6a. Double Counterpoint. *Two hours.* Professor STANLEY.
7. Canon. Fugue. *Two hours.* Professor STANLEY.
- 9a. The History of Music, including Modern Opera. Lectures. *Two hours.* Professor STANLEY.
- 10a. Free Composition. Instrumentation. *Two hours.* Professor STANLEY.
- 11a. Musical Criticism. Lectures. *One hour.* Professor STANLEY.

SECOND SEMESTER.

2. Fundamental Principles of Musical Science, including Elementary Harmony. *Two hours.* Professor STANLEY.
- 2a. Choral Music. *Two hours.* Professor STANLEY.
4. Science of Harmony. *Two hours.* Professor STANLEY.
- 5b. Simple Counterpoint. *Two hours.* Professor STANLEY.
- 6b. Double Counterpoint and Simple Forms. *Two hours.* Professor STANLEY.
8. Canon. Fugue. Sonata Form. *Two hours.* Professor STANLEY.
- 9b. The History of Music. Wagner's Music Dramas. Lectures. *Two hours.* Professor STANLEY.
- 11b. Music in its Ethical Relations. Lectures. *One hour.* Professor STANLEY.

HISTORY.

Courses 1 and 2 must precede all other courses in history. Courses 3 and 4 may, however, be taken in connection with Courses 1 and 2 respectively. Course 13 may be taken in connection with Course 2 by all but first year students.

FIRST SEMESTER.

1. The General History of Europe from the fall of the Roman Empire to the close of the Middle Ages. Lectures, and quizzes on lectures and on assigned reading. *Three hours.* Dr. DIXON.
3. The Political and Constitutional History of England from the earliest times to 1603. Lectures and quizzes. *Three hours.* Mr. JOHNSTON.
5. Advanced study of the Constitutional History of England during the Middle Ages, based upon Stubbs's Select Charters and The Chronicles and Memorials. *Three hours.* Mr. JOHNSTON.
7. History and Institutions of Greece. Text-book: Oman. *Three hours.* Dr. DIXON.
11. History of Europe from 1789 to 1815. Lectures. *Two hours.* Professor HUDSON.

- 11a. Supplementary to Course 11. Quiz on lectures, together with a study of some of the more important original sources. Two sections. *One hour.* Professor HUDSON.
14. The Political and Constitutional History of the United States. Lectures, and quizzes on lectures and on assigned reading. Three sections. *Three hours.* Professor McLAUGHLIN.
18. Research Work in American History, with lectures. *Three hours.* Professor McLAUGHLIN.
Course 18 is open only to graduate students and to seniors obtaining permission.
19. Constitutional Law and Political Institutions of the United States. Text-books and lectures. *Three hours.* Professor McLAUGHLIN.
21. The British Empire; how it was formed and how it is governed. Lectures. *Two hours.* Professor HUDSON.
In connection with Course 21 students wishing to do advanced work in English institutions may elect Course 21a, Course 21b, or both.
- 21a. Supplementary to Course 21, the object being to direct the reading of students in connection with the topics covered by the lectures. *One hour.* Professor HUDSON.
- 21b. Municipal Government in Great Britain. *One hour.* Professor HUDSON.
23. Advanced course for the study of the Financial History of the French Revolution. *Three hours.* Professor HUDSON.
Course 23 is open only to graduate students and to seniors obtaining permission.
25. Graduate Seminary. Professors HUDSON and McLAUGHLIN and Dr. DIXON.
27. English Historical Writers and Materials. Mediæval period. *One hour.* Mr. JOHNSTON.

SECOND SEMESTER.

2. The General History of Europe from the close of the Middle Ages to the Outbreak of the French Revolution. Lectures, and quizzes on lectures and on assigned reading. *Three hours.* Dr. DIXON.
4. The Political and Constitutional History of England since 1603. Lectures and quizzes. *Three hours.* Mr. JOHNSTON.
6. The History of the English Reformation. Lectures. *Three hours.* Mr. JOHNSTON.
8. Roman History and Institutions. *Three hours.* Dr. DIXON.
12. History of Europe since 1815. Lectures. *Two hours.* Professor HUDSON.

- 12a. Supplementary to Course 12. Quiz on lectures together with a study of some of the more important original sources. Two sections. *One hour.* Professor HUDSON.
13. American Colonial History. Lectures and assigned reading. *Three hours.* Professor McLAUGHLIN.
15. The Political and Constitutional History of the United States. Continuation of Course 14. Lectures and quizzes on lectures and on assigned reading. Three sections. *Three hours.* Professor McLAUGHLIN.
17. Research Work in the History of the United States. *Two hours.* Professor McLAUGHLIN.
Course 17 is open only to graduates and to seniors obtaining permission.
20. Topical Work in American History. *One hour.* Professor McLAUGHLIN.
Course 20 is open only to students who have special permission. Candidates for the teacher's diploma in history are expected to elect this course.
22. The Political Institutions of Germany, France, Switzerland, and other European countries. Lectures. *Two hours.* Professor HUDSON.
In connection with Course 22 students wishing to do advanced work in political institutions may elect Course 22a, Course 22b, or both.
- 22a. Supplementary to Course 22, the object being to direct the reading of students in connection with the topics covered by the lectures. *One hour.* Professor HUDSON.
- 22b. Municipal Government in Continental Europe. *One hour.* Professor HUDSON.
24. Bismarck and his work. *Three hours.* Professor HUDSON.
Course 24 is open only to graduate students and to seniors obtaining permission.
26. Graduate Seminary. Professors HUDSON and McLAUGHLIN and Dr. DIXON.
28. English Historical Writers and Materials. Modern period. *One hour.* Mr. JOHNSTON.

PHILOSOPHY.

The courses in philosophy are not open to first year students. Courses 1, 2a, 2b, 3, 4, 13, and 14 are primarily for undergraduates. Courses 3a, 4a, 6, 7, 8, 10, 10a, 11, 12, 14a, 18, 21, 22, 23, 24, 26, and 27 are primarily for graduates, but students who have had the necessary preparation will not be excluded. The other courses are for both undergraduates and

graduates. Students should consult with the instructors before making elections.

The attention of students in philosophy is called especially to the following courses in other branches of study; Greek 10 and 12, Latin 6*a*, 13, and 15, French 11, German 51, 52, and 61, Italian 3 and 4, English 15 and 21, History 1, 2, 11, 12, 14, and 15, Science and Art of Teaching 3, 4, and 6, Political Economy 2, 8, 9, and 22, and Mathematics 3, 4, 9, and 10.

The Philosophical Club holds regular meetings during the year, conducted chiefly by the students; though papers are given at intervals by the instructors.

FIRST SEMESTER.

1. Philosophical Introduction. Part I, first half of semester. Meaning and Scope of Philosophy. Lectures and quizzes. Part II, second half of semester. *Either* (a) Elements of Logic, or (b) Elements of Psychology. *Three hours.* Part I, Professor WENLEY; Part II (a), Mr. REBEC; Part II (b), Assistant Professor LLOYD.
Course 1 is also given in the second semester.
3. History of Ancient and Mediæval Philosophy. Lectures and reading. *Three hours.* Assistant Professor LLOYD.
Course 3 should be preceded by Course 1 and either 2*a* or 2*b*.
- 3*a*. Special Studies in History of Philosophy. Reading, reports, and theses. *One hour.* Assistant Professor LLOYD.
5. History of Ancient Ethics. Lectures and assigned reading. *Two hours.* Mr. REBEC.
6. Plato's Republic. Collateral reading and theses. *Two hours.* Mr. REBEC.
- [7. Aristotle's Ethics. *Two hours.* Mr. REBEC.
Course 7 is omitted in 1896-97.]
8. Spinoza. Elwes's Translation of Spinoza's Works. Lectures, reading, and reports. *Two hours.* Assistant Professor LLOYD.
10. Kant's Critique of Pure Reason. Watson's Selections from Kant. Lectures, reading, and reports. *Two hours.* Professor WENLEY.
- 10*a*. Special Studies in Kant. One thesis. *One hour.* Professor WENLEY.
15. Political Philosophy. A critical study of society, sovereignty, rights, duty, and the idea of the social organism. *Two hours.* Assistant Professor LLOYD.
17. Æsthetics. An historical review of leading theories and their connection with philosophical systems. Bosanquet's History of Æsthetics will serve as a basis of study. *Two hours.* Mr. REBEC.
- [19. Representative Modern Psychologists. *Two hours.*
Course 19 is omitted in 1896-97.]

74 *Department of Literature, Science, and the Arts.*

21. The Relation Between Science and Philosophy—historically treated. *Two hours.* Professor WENLEY.
23. Journal Club. Reading of journals and new publications. Reports and discussions. Special reference to studies in other departments. *Two hours.* Professor WENLEY, Assistant Professor LLOYD, and Mr. REBEC.
- [25. Experimental Psychology. Beginners' Course. *Three hours.* Course 25 is also given in the second semester. It is omitted in 1896-97.]
- [26. Experimental Psychology. Advanced Course. Original Investigation. *Six hours.* Course 26 is omitted in 1896-97.]

SECOND SEMESTER.

1. Philosophical Introduction. Same as in first semester. *Three hours.* Professor WENLEY, Assistant Professor LLOYD, and Mr. REBEC.
- 2a. Second Course in Logic. Minto's Logic Inductive and Deductive, and Bosanquet's Essentials in Logic. *Two hours.* Mr. REBEC.
- 2b. Second Course in Psychology. James's Text-book of Psychology. *Two hours.* Assistant Professor LLOYD.
4. History of Modern Philosophy. Lectures and reading. *Three hours.* Assistant Professor LLOYD.
- 4a. Special Studies in History of Philosophy. Reading, reports, and theses. *One hour.* Assistant Professor LLOYD.
9. Hume. Origin, development, and influence of his thought. Lectures, reading, and theses. *Two hours.* Mr. REBEC.
11. Hegel. Wallace's Logic of Hegel. *Two hours.* Professor WENLEY.
- [12. Philosophy since Hegel. *Two hours.* Professor WENLEY. Course 12 is omitted in 1896-97.]
13. Metaphysics of Ethics. *Two hours.* Professor WENLEY.
14. Systematic Ethics. *Two hours.* Assistant Professor LLOYD. Students are recommended to take Courses 13 and 14 together.
- 14a. Special Studies in Ethics. Reading, reports, and theses. *One hour.* Assistant Professor LLOYD.
- [16. Philosophy of Religion. *Two hours.* Assistant Professor LLOYD. Course 16 is omitted in 1896-97.]
18. The Relation of Rhetoric to Philosophy. Philosophical basis of discourse. *Two hours.* Mr. REBEC.
- [20. Representative Modern Psychologists. Continuation of Course 19. *Two hours.* Course 20 is omitted in 1896-97.]

22. The Relation between Science and Philosophy—systematically treated. Continuation of Course 21. *Two hours.* Professor WENLEY.
24. Journal Club. Reading of Journals and new publications. Reports and discussions. Special reference to studies in other departments. *Two hours.* Professor WENLEY, Assistant Professor LLOYD, and Mr. REBEC.
- [25. Experimental Psychology. Beginners' Course. *Three hours.*
Course 25 is also given in first semester. It is omitted in 1896-97.]
- [27. Experimental Psychology. Advanced Course. Continuation of Course 26. *Six hours.*
Course 27 is omitted in 1896-97.]

THE SCIENCE AND ART OF TEACHING.

Students who wish to prepare themselves for ordinary class-room duties, are advised to pursue Course 1, if they can take but one; those who propose to assume the management of high schools or graded schools, should take Course 5, in connection with Course 1. In both cases, however it is desirable for them to pursue Course 2. The order in which Courses 1 and 2 are taken is not material. Students are recommended to take Course 1 or Course 2 before the historical courses.

The University gives a Teacher's Diploma to Bachelors at the time of their graduation, provided they have completed Courses 1 and 2 and some one of the three-hour courses described below, and also at least one of the teachers' courses offered by professors of other branches. Also to Masters and Doctors, when they receive their degrees, provided they have pursued teaching as a major or a minor study, and have also taken a teachers' course in some other department. The teachers' courses offered in other departments are described under their appropriate heads.

For the conditions on which the Teacher's Certificate is given, see page 107.

FIRST SEMESTER.

1. Practical Pedagogy. The arts of teaching and governing; methods of instruction and general school-room practice; school hygiene; school law. Lectures with reading. Hinsdale's *How to Study and Teach History*, and *Teaching the Language-Arts*. *Four hours.* Professor HINSDALE.
3. History of Education, Ancient and Mediæval. Recitations and lectures. Text-book: Compayré's *History of Pedagogy*. The subjects treated in the lectures given in this course are Oriental, Greek, and Roman education, and the rise and early development of Christian Schools. *Three hours.* Professor HINSDALE.

5. School Supervision. General school management, the art of grading and arranging courses of study, the conduct of institutes, etc. Recitations and lectures. Text-book: Payne's Chapters on School Supervision. *Three hours.* Professor HINSDALE.

SECOND SEMESTER.

2. Theoretical and Critical Pedagogy. The principles underlying the arts of teaching and governing. Lectures with readings. Hinsdale's Studies in Education. *Four hours.* Professor HINSDALE.
4. History of Modern Education. Recitations and lectures. Text-book: Compayré's History of Pedagogy. The topics dealt with in the lectures of this course are the movements of modern educational thought and practice. *Three hours.* Professor HINSDALE.
6. The Comparative Study of Educational Systems, Domestic and Foreign. Lectures. *Two hours.* Professor HINSDALE.
- [7. Seminary. Study and discussion of special topics in the history and philosophy of education. *Two hours.* Professor HINSDALE. Course 7 is omitted in 1896-97.]
8. The Great Exponents of Educational Thought. An historical and expository course for students of advanced standing. Lectures with reading. Davidson's Aristotle and Ancient Educational Ideals. *One hour.* Professor HINSDALE.

POLITICAL ECONOMY AND SOCIOLOGY.

Political Economy.—The courses in political economy are classified as undergraduate, intermediate, and graduate courses. Courses 2, 3, 4, and 5 are primarily designed for undergraduate students; of these, Course 2 is required for admission to all other courses except to Course 3; Course 3 should if possible precede Course 2. The intermediate courses, viz.: Courses 6, 8, 9, 11, 13, 17, and 18, may also be taken by any student and will count as part of the regular work of graduate students. The graduate courses, viz.: Courses 12, 25, 26, 27, and 28 are not open to undergraduate students who pursue their work on the credit system, but may be taken by those who are working on the university system.

Sociology.—Work in sociology may begin either with Course 19 or Course 22. The latter should be chosen by those who care only for the practical aspects of the subject, and who intend taking only one course. Those who plan to take all the work should complete both these courses before their senior year.

FIRST SEMESTER.

2. Elements of Political Economy. Lectures and quizzes. *Four hours.* Professor TAYLOR.

5. Problems in Political Economy. Lectures and quizzes. *Four hours.* Professor ADAMS.
Course 5 treats in a cursory manner current problems in political economy. The problems studied are the following: The Railway Problem, Industrial Crises, Free Trade and Protection, Industrial Reforms, Labor Legislation, and Taxation. It is designed as the supplement of Course 2 by which it must be preceded, and is introductory to Courses 4, 6, 8, 9, 11, 12, and 13, although it is not required for these courses.
9. Money and Banking. *Three hours.* Professor TAYLOR.
- [11. Industrial History of the United States, with special reference to the tariff. *Two hours.* Professor TAYLOR.
Course 11 is omitted in 1896-97.]
13. The Theory and Practice of Statistics. *One hour.* Dr. COOLEY.
Course 13 treats statistics as a method of social research, an instrument important not only to economists and statisticians but also to all who wish to qualify themselves to understand or criticise current social and political discussion.
17. Seminary in Finance. *Two hours.* Professor ADAMS.
19. Principles of Sociology. Lectures and quizzes. *Four hours.* Dr. COOLEY.
Course 19 aims at a systematic and comprehensive study of the underlying principles of social science. It embraces an historical review of the development of institutions, but is chiefly concerned with an analysis of existing society. Giddings's Principles of Sociology is recommended to be read in connection with the lectures.
21. Special Studies in Sociology. Reading, reports, and discussions. *Two hours.* Dr. COOLEY.
25. Critical Studies in Economics and Sociology. *Three hours.* Professors ADAMS and TAYLOR and Dr. COOLEY.
Course 25 is specially intended for graduate students, but is open to seniors specializing in political economy who satisfy the instructors of their fitness for the work.
27. Current Economic Legislation and Literature. *One hour.* Professor ADAMS.

SECOND SEMESTER.

3. History of the Development of Industrial Society. Lectures and quizzes. *Three hours.* Professor ADAMS.
Course 3 is designed to be introductory to all courses in political economy. It is not, however, required for admission to such courses. It embraces a history of English industrial society from the twelfth century to the present time, and is designed to show

- how modern industrial customs and rights came into existence. It is desirable that it should be preceded by Course 1 in history.
4. Principles of the Science of Finance. Text-book. *Three hours.* Professor TAYLOR.
 6. The Transportation Problem. Lectures and quizzes. *Three hours.* Professor ADAMS.
 8. Socialism. History and Theory. *Two hours.* Professor TAYLOR.
 - [12. History of Political Economy. Text-book, with supplementary lectures and reports. *Two hours.* Professor TAYLOR.
Course 12 is important to all students specializing in political economy. It is omitted in 1896-97.]
 18. Seminary in Economics. *Two hours.* Professor TAYLOR.
 22. Problems in Sociology. Lectures and quizzes. *Four hours.* Dr. COOLEY.
Course 22 embraces a study of the treatment of criminals, poor relief, the assimilation of immigrants, the development of great cities, and other sociological questions of present importance.
 24. Special Studies in Sociology and Statistics. *Two hours.* Dr. COOLEY.
Course 24 is similar in character to Course 21. Students who have taken Course 13 and wish to follow it with practical training in statistical work, have an opportunity to do so.
 26. Critical Studies in Economics and Sociology. Continuation of Course 25. *Three hours.* Professors ADAMS and TAYLOR and Dr. COOLEY.
 28. Current Economic Legislation and Literature. *One hour.* Professor ADAMS.

INTERNATIONAL LAW.

FIRST SEMESTER.

1. Lectures on International Law. *Two hours.* President ANGELL.
Course 1 is open only to those who have completed two courses in history; Course 2 is especially recommended as one of the two.

SECOND SEMESTER.

2. History of Treaties. *Two hours.* President ANGELL.
Course 2 must be preceded by Course 1.

BIBLIOGRAPHY.

FIRST SEMESTER.

1. Historical, Material, and Intellectual Bibliography. Lectures. *One hour.* Professor R. C. DAVIS.

MATHEMATICS.

Courses 1, 2, 3, 4, and 6 are identical with courses prescribed for students in the Department of Engineering. Courses 1*a*, 2*a*, 3*a*, and 4*a*, to be taken in their order, are intended for other students; Course 1*a* being required for the degree of B.L., and 1*a* and 2*a* for the degrees of A.B., Ph.B., and B.S. Students so desiring may substitute Courses 1, 1*b*, and 2 for the shorter Courses 1*a*, 2*a*; and Courses 3, 4, for the shorter Courses 3*a*, 4*a*.

Courses 1, 1*a*, 1*b*, 2, 2*a*, 2*b*, 3, 3*a*, 4, 4*a*, and 6 are intended primarily for undergraduates; Courses 5, 7, 8, 10, 12, 15, 19, 20, 21, and 22 are for graduates and undergraduates; Courses 9, 11, 13, 14, 16, 17, 18, 23, and 24 are primarily for graduates, though undergraduates of exceptional ability are admitted by special permission.

FIRST SEMESTER.

1. Algebra and Analytic Geometry (I). Five sections. *Four hours.* Mr. LYMAN, Mr. HALL, Mr. GODDARD, and Mr. COAR.
- 1*a*. Plane Trigonometry and Algebra. Ten sections. *Three hours.* Mr. LYMAN, Mr. HALL, Mr. GODDARD, and Mr. COAR.
- 1*b*. Plane Trigonometry. Three sections. *Two hours.* Mr. GODDARD and Mr. COAR.
3. Calculus. Four sections. *Five hours.* Professor ZIWET, Mr. LYMAN, and Dr. GLOVER.
- 3*a*. Calculus (I). *Four hours.* Professor BEMAN.
5. Solid Analytic Geometry (I). *Two hours.* Professor BEMAN.
6. Calculus and Mechanics (II). Three sections. *Four hours.* Professor ZIWET and Mr. LYMAN.
7. Projective Geometry (I). *Three hours.* Dr. GLOVER.
9. Differential Equations (I). *Three hours.* Professor BEMAN.
11. Introduction to the Theory of Functions (I). *Three hours.* Dr. GLOVER.
13. Mathematical Reading. *Credit arranged with instructor.*
Course 13 is designed to give graduate students an opportunity to read standard mathematical works under the direction of the Faculty.
16. Advanced Mechanics (II). *Two hours.* Professor ZIWET.
19. Teachers' Seminary. Algebra. *Two hours.* Professor BEMAN.
Course 19 is open only to those who have completed Courses 1, 2, 3, 4, or 1*a*, 2*a*, 3*a*, 4*a*.
- [21. Fourier's Series, and Spherical, Cylindrical, and Ellipsoidal Harmonics. *Two hours.*
Course 21 is omitted in 1896-97.]
- [23. Theory of Substitutions (I). *Three hours.*
Course 23 is omitted in 1896-97.]

SECOND SEMESTER.

2. Analytic Geometry (II). Five sections. *Four hours.* Mr. LYMAN, Mr. GODDARD, and Mr. COAR.
- 2a. Plane Analytic Geometry. Eleven sections. *Four hours.* Professor ZIWET, Mr. LYMAN, Mr. HALL, Mr. GODDARD, and Mr. COAR.
- 2b. Spherical Trigonometry. *Two hours.* Mr. HALL.
4. Calculus and Mechanics (I). Four sections. *Five hours.* Professor ZIWET, Mr. LYMAN, and Dr. GLOVER.
- 4a. Calculus (II). *Four hours.* Professor BEMAN.
8. Projective Geometry (II). *Three hours.* Dr. GLOVER.
10. Quaternions. *Credit arranged with instructor.* Professor BEMAN.
12. Modern Higher Algebra. *Three hours.* Mr. HALL.
13. Mathematical Reading. *Credit arranged with instructor.*
See note to Course 13 in first semester.
14. Introduction to the Theory of Functions (II). *Three hours.* Dr. GLOVER.
15. Advanced Mechanics (I). *Three hours.* Professor ZIWET.
17. Differential Equations. *Two hours.* Professor BEMAN.
18. Solid Analytic Geometry (II). *Two hours.* Professor BEMAN.
20. Teachers' Seminary. Geometry. *Two hours.* Professor BEMAN.
Course 20 is open only to those who have completed Courses 1, 2, 3, 4, or 1a, 2a, 3a, 4a.
- [22. Fourier's Series, and Spherical, Cylindrical, and Ellipsoidal Harmonics (II). *Two hours.*
Course 22 is omitted in 1896-97.]
- [24. Theory of Substitutions. *Three hours.*
Course 24 is omitted in 1896-97.]

PHYSICS.

FIRST SEMESTER.

1. Mechanics, Sound, and Light. *Five hours.* Dr. ST. JOHN.
For Course 1 a knowledge of plane trigonometry is indispensable.
3. Physical Laboratory Work for Beginners. This course may be elected as 3a, *three hours*, or 3b, *two hours.* Dr. GUTHE.
Course 3 must be preceded or accompanied by Course 1. It is also given in the second semester. Students presenting note-books from High School physical laboratories approved by this department, may be allowed *three hours* credit instead of *two* for Course 3b.
4. Primary and Secondary Batteries. Recitations and laboratory work. *Two hours.* Dr. GUTHE.

- Course 4 must be preceded by Courses 1, 2, 3*a* or 3*b*, and a course in general or in analytical chemistry.
5. Electrical Measurements. Lectures, recitations, and laboratory work. *Three hours.* Professor CARHART, Assistant Professor PATTERSON, and Dr. GUTHE.
Course 5 must be preceded by Courses 1, 2, and 3*a* or 3*b*. A knowledge of calculus is also required.
 6. Sound. Violle: *Acoustique.* *Three hours.* Dr. ST. JOHN.
Course 6 must be preceded by Course 1 and by Course 3*a* or 3*b*. A knowledge of calculus is also required.
 7. Electricity and Magnetism: Mascart and Joubert. *Three hours.* Assistant Professor PATTERSON.
Course 7 must be preceded by Course 2. A knowledge of calculus is also required.
 9. Theory of Heat: Preston. *Two hours.* Professor CARHART.
 13. Geometrical Optics. *Two hours.* Dr. ST. JOHN.
Course 13 must be preceded by Course 1. A knowledge of calculus is also required.
 14. Sound. Advanced laboratory work. *Two hours.* Dr. ST. JOHN.
Course 14 must be preceded by Course 6.

SECOND SEMESTER.

1. Mechanics, Sound, and Light. *Five hours.* Dr. ST. JOHN.
For Course 1 a knowledge of plane trigonometry is indispensable.
2. Electricity and Magnetism. *Four hours.* Professor CARHART and Assistant Professor PATTERSON.
Course 2 must be preceded by Course 1 and by a course in general or in analytical chemistry.
- 2*a*. Heat. Lectures and recitations. *Two hours.* Professor CARHART and Assistant Professor PATTERSON.
Course 2*a* must be preceded by Course 1.
3. Physical Laboratory Work for Beginners. This course may be elected as 3*a*, *three hours*; or 3*b*, *two hours*. Assistant Professor PATTERSON and Dr. GUTHE.
See note to Course 3 in first semester.
8. Heat. Laboratory work. *Two hours.* Dr. GUTHE.
Course 8 must be preceded by Course 2*a*.
10. Electricity and Magnetism: Mascart and Joubert. *Two hours.* Assistant Professor PATTERSON.
Course 10 must be preceded by Course 7.
11. Theory of Light: Preston. Recitations and laboratory work. *Four hours.* Dr. ST. JOHN.

Course 11 must be preceded by Course 6. A knowledge of calculus is also required.

12. Electrical Measurements. Continuation of Course 5. Lectures and laboratory work. *Two hours.* Dr. GUTHE.

15. Light. Advanced laboratory work. *Two hours.* Dr. ST. JOHN.
Course 15 must be preceded by Course 11.

16. Chemical Physics. Electrochemistry. Theories of Solutions and Electrolytes, including the Osmotic Theory of the Voltaic Cell. Lectures and laboratory work. *Three hours.* Dr. GUTHE.

Course 16 must be preceded by Course 5 and by Courses 1 and 5 in general chemistry.

GENERAL CHEMISTRY.

Before beginning the study of chemistry students should complete Course 1 in physics. Students who enter upon the study of chemistry with the intention of fitting themselves for teaching the science, or who intend to acquire scientific knowledge of the subject for other purposes, should take Courses 1, 2, 3, 5, and 6. Courses 9 to 13 are also recommended to all except those who wish to make a purely technical application of the study. The research laboratory is intended for graduate students and for advanced undergraduates.

FIRST SEMESTER.

1. Inorganic Chemistry, Descriptive and Experimental. Lectures and recitations. *Three hours.* Mr. HIGLEY.

6. Historical and Theoretical Chemistry. Lectures. *Two hours.* Professor FREER.

Course 6 must be preceded by Courses 2 and 5 in general chemistry; the student must also have a good knowledge of analytical and organic chemistry. The course is intended for undergraduates, but is also suitable for graduates.

12. Physical Chemistry. Chemical Dynamics. Continuation of Course 6. *Two hours.* Dr. LACHMAN.

Course 12 must be preceded by Courses 1 and 2 in physics, and either preceded or accompanied by Course 6 in general chemistry. It is extremely desirable that the student be familiar with calculus and with organic chemistry.

EITHER FIRST OR SECOND SEMESTER.

2. Laboratory Work in General Inorganic Chemistry. *Credit arranged with instructor.* Mr. HIGLEY, Mr. LICHTY, and Dr. SHERMAN.

Course 2 must be preceded or accompanied by Course 1 or an equivalent. It is supplementary to Course 1 and covers in the

laboratory the ground covered by lectures in Course 1. Students should elect at least *five hours* of laboratory work in Course 2 during the year, in order to complete the general work of inorganic chemistry.

3. Continuation of Course 2. Laboratory Work in Advanced Inorganic Chemistry. *Credit arranged with instructors.* Mr. HIGLEY, Mr. LICHTY, and Dr. SHERMAN.

Course 3 must be preceded by at least *five hours* of work in Course 2. Students taking this course, after completing the regular work, are given some special advanced work in systematic inorganic preparations. If they wish to continue the work in the following year, they may do so by electing Course 4.

4. Laboratory Research in General Inorganic Chemistry. Continuation of Course 3. *Credit arranged with instructors.* Professor FREER, Mr. HIGLEY, and Mr. LICHTY.

Course 4 is intended primarily for undergraduates who have taken the regular courses in laboratory instruction given in this department, but it is also designed for graduate students who have received equivalent instruction.

7. Laboratory Research. *Credit arranged with instructor.* Professor FREER.

Course 7 is intended for advanced students, and it is open only to students who receive special permission. The work is in General Organic Chemistry, although inorganic topics may be selected at the wish of the student. Students electing this course must be able to read German and French, and must have a knowledge of general inorganic, organic, and analytical chemistry.

8. Journal Club. *One hour.* Professor FREER.

Course 8 must be preceded by Course 6. All the instructors and assistants in the department take part in the club. It is intended for graduate students.

SECOND SEMESTER.

5. Inorganic Chemistry, Descriptive and Experimental. Continuation of Course 1. *Four hours.* Professor FREER.

Course 5 must be preceded by Course 1.

9. Laboratory Work in the Methods of Determining Molecular Weights. *Three hours.* Mr. HIGLEY.
10. Spectroscopic Analysis and Use of the Spectroscope. Lectures and laboratory work. *Four hours.* Mr. LICHTY.
11. Work with the Polariscopes, etc. Laboratory work. *Two hours.* Mr. LICHTY.

13. Laboratory Work, Thermochemical and Electrochemical. *Three hours.* DR. LACHMAN.

Course 13 must be preceded by Course 12.

ANALYTICAL CHEMISTRY AND ORGANIC CHEMISTRY.

It is recommended that a laboratory course in general chemistry precede laboratory work in analytical or in organic chemistry. Those entering upon the study of analytical chemistry, whether for scientific or technical ends, should first take Courses 1 and 4. In organic chemistry, Course 10 or Courses 10 and 11 should be taken first, and either Course 12 or Course 14 may be taken next. In synthetic research, Courses 10, 11, 12, 13, and 17 may be taken. For commercial analysis, Courses 10, 11, and 14 should be taken. For metallurgical analysis, Courses 1, 4, 6, 7, and 9 are required. For manufacturing chemistry, Courses 1, 4, 5, 10, 11, 14, and 16 are advised. In preparation for physiological chemistry, Courses 1, 4, and 10 are requisite.

Courses 13, 17, 18, 19, 19a, 22, 23, 24, and 25 are intended primarily for graduates and undergraduate students who have had a somewhat extended training in chemistry. The permission of the instructor must be obtained before electing them. It is suggested that Course 9 in general chemistry precede Courses 13, 18, and 19a in organic chemistry.

FIRST SEMESTER.

1. Qualitative Analysis. Recitations and laboratory work. Two sections. *Ten hours.* Professor JOHNSON and Mr. BROWN.

Course 1 must be preceded by Course 2 or Course 5 in general chemistry or an equivalent.

3. Qualitative Analysis. Recitations and laboratory work. *Five hours.* Professor JOHNSON.

Course 3 must be preceded by Course 2 or Course 5 in general chemistry or an equivalent. It is continued in Course 3a in the second semester, and the two courses, 3 and 3a, together, are equivalent to Course 1.

9. Technical Examination of Gold and Silver Ores, including the Fire Assay. Laboratory work, lectures, and reading. *Two hours.* Professor E. D. CAMPBELL.

Course 9 must be preceded by Course 4. Course 2 in mineralogy is recommended.

10. Organic Chemistry. Lectures and library studies. *Five hours.* Professor PRESCOTT.

Course 10 must be preceded by Course 1 or by Courses 3 and 3a.

- 14a. Organic Analysis. Laboratory work upon chosen subjects in continuation of Course 14. *Three hours.* Mr. DAVOLL.

21. Technical Gas Analysis. Laboratory work. *One hour.* Professor E. D. CAMPBELL.

Course 21 is open only to those who receive special permission.

EITHER FIRST OR SECOND SEMESTER.

4. Quantitative Analysis. Beginners' course. Recitations and laboratory work. *Seven hours.* Professor E. D. CAMPBELL.
Course 4 is open to those who have taken Course 1 or Courses 3 and 3a.
5. Advanced Quantitative Analysis. Laboratory work. *Five hours.* Professor E. D. CAMPBELL.
Course 5 is open to these who have taken Course 4 and who receive special permission.
6. Iron and Steel Analysis. Laboratory work. *Five hours.* Professor E. D. CAMPBELL.
Course 6 is open to those who have taken Course 4 and who receive special permission. It cannot be taken at the same time with Course 5.
7. Special Methods in Iron and Steel Analysis. Continuation of Course 6. Laboratory work. *Five hours.* Professor E. D. CAMPBELL.
11. Organic Preparations. Laboratory work. *Two hours.* Mr. DAVOLL and Mr. TROWBRIDGE.
Course 11 must be preceded or accompanied by Course 10.
- 11a. Organic Preparations. Laboratory work, continuation of Course 11. *Two hours.* Mr. DAVOLL and Mr. TROWBRIDGE.
12. Organic Preparations and Ultimate Analysis. Laboratory work. *Five hours.* Professor PRESCOTT and Mr. DAVOLL.
Course 12 must be preceded by Course 4, and preceded or accompanied by Course 10.
13. Synthetical Organic Chemistry. Laboratory work, continuation of Course 12. *Five hours.* Professor PRESCOTT and Mr. DAVOLL.
17. Original Investigations in Organic Chemistry. Laboratory work and library reading. *Five hours.* Professor PRESCOTT.
18. Original Investigation. Continuation of Course 17. *Five hours.* Professor PRESCOTT.
Courses 17 and 18 must be preceded by Courses 1, 4, 10, and 11 or 12.
19. Organic Synthesis. Laboratory and library work. *Three hours.* Professor PRESCOTT and Mr. TROWBRIDGE.
- 19a. Organic Synthesis. Continuation of Course 19. *Three hours.* Professor PRESCOTT and Mr. TROWBRIDGE.
Courses 19 and 19a should be preceded by Courses 1, 4, 10, and 11 or 12.

22. Original Investigations in Qualitative Analysis and Applied Chemistry. Laboratory work. *Five hours.* Professor JOHNSON.
23. Original Investigations in Qualitative Analysis and Applied Chemistry. Laboratory work. *Three hours.* Professor JOHNSON.
Courses 22 and 23 must be preceded by Courses 1 and 4.
24. Original Investigations in Quantitative Analysis and its Applications. Laboratory work and reading. *Five hours.* Professor E. D. CAMPBELL.
25. Original Investigations in Quantitative Analysis and its Applications. Laboratory work and reading. *Three hours.* Professor E. D. CAMPBELL.
Courses 24 and 25 are open only to those who have special permission.
26. Bibliography of Quantitative Analysis. Reading and seminary work. *One hour.* Professor E. D. CAMPBELL.
27. Bibliography of Quantitative Analysis. Reading and seminary work. *Two hours.* Professor E. D. CAMPBELL.
Courses 26 and 27 must be preceded or accompanied by one of the following courses: 5, 6, 7, 9, 24, or 25.

SECOND SEMESTER.

1. Qualitative Analysis. Recitations and laboratory work. *Ten hours.* Professor JOHNSON.
Course 1 must be preceded by Course 2 or Course 5 in general chemistry or an equivalent.
2. Advanced Qualitative Analysis. Continuation of Course 1, with original work. Recitations and laboratory work. *Five hours.* Professor JOHNSON.
Course 2 must be preceded or accompanied by Course 4.
3. First Steps in Qualitative Analysis. Recitations and laboratory work. *Five hours.* Professor JOHNSON.
Course 3 must be preceded by Course 2 or Course 5 in general chemistry or an equivalent.
- 3a. Qualitative Analysis in continuation of Course 3. Recitations and laboratory work. *Five hours.* Professor JOHNSON and Mr. BROWN.
Courses 3 and 3a are together equivalent to Course 1 and cover the same ground.
14. Organic Analysis. Lectures and laboratory work. *Five hours.* Mr. DAVOLL.
Course 14 must be preceded by Courses 4 and 10.

16. Manufacture and Purification of Chemicals. Laboratory work. *Four hours.* Professor JOHNSON.
Course 16 is open to those who have completed Courses 1 and 2.
20. Chosen Subjects in Chemistry. Lectures. *Two hours.* Professor PRESCOTT.
Course 20 must be preceded by Courses 10 and 11 or 12.
28. Organic Chemistry. Lectures. *Four hours.* Professor PRESCOTT.
Course 28 must be preceded by Course 1 or by Course 3 and then be accompanied by Course 3a.
30. Organic Chemistry. Lectures and laboratory work. *Five hours.* Mr. TROWBRIDGE.
Course 30 must be preceded by Course 1 or by Course 3 and then be accompanied by Course 3a.

METALLURGY.

FIRST SEMESTER.

2. Micro-Metallography. The study of the microscopic structure of metals as related to their physical and chemical properties. Laboratory work with reading. *One hour.* Professor E. D. CAMPBELL.
Course 2 can be taken only by those who have taken Course 1 and who receive special permission.

SECOND SEMESTER.

1. Fuel and Refractory Material. Iron and Steel. *Three hours.* Professor E. D. CAMPBELL.
Course 1 must be preceded by Course 1 or Course 3 in analytical chemistry, or by Course 1 in general chemistry.

PHYSIOLOGICAL CHEMISTRY, BACTERIOLOGY, AND HYGIENE.

The courses in these subjects given by Professors VAUGHAN and NOVY are arranged for the most part to meet the wants of students in the Department of Medicine and Surgery, and of students who propose to study medicine in the future.

FIRST SEMESTER.

1. Hygiene. Lectures. *Three hours.* Professor VAUGHAN.
2. Bacteriology. Lectures. *Three hours.* Professor NOVY.

EITHER FIRST OR SECOND SEMESTER.

3. Bacteriology. Laboratory work, *daily for three months*, beginning the first week in October, January, and April. *Five hours.* Professor NOVY.

- Course 3 is designed especially for students who propose to study medicine and is not open to other students except by permission.
- 3a. Bacteriology. Special methods. *Two hours.* Professor NOVY.
Course 3a must be preceded by Course 3.
 4. Methods of Hygiene. Analysis of water, air, soil, milk, butter, etc. Laboratory work. *Seven hours.* Professor NOVY.
Course 4 is open to those who have taken Course 1 or Course 3 in analytical chemistry.
 5. Methods of Hygiene. Continuation of Course 4. *Seven hours.* Professor NOVY.
 7. Physiological Chemistry, including Analysis of Urine. Lectures and laboratory work. *Seven hours.* Professor NOVY.
Course 7 is open to those who have taken Course 1 or Course 3 in analytical chemistry and Course 10 in organic chemistry.
 8. Advanced Physiological Chemistry. Laboratory work and reading. *Seven hours.* Professor NOVY.
 9. Original Research on the Causation of Disease. Laboratory work and reading. *Five hours.* Professor VAUGHAN.
Course 9 is designed for advanced students and is open only to such as receive special permission.
 10. Original Research on the Causation of Disease. Continuation of Course 9. *Five hours.* Professor VAUGHAN.

SECOND SEMESTER.

- 1a. Hygiene. Lectures. Continuation of Course 1. *Two hours.* Professor VAUGHAN.
6. Physiological Chemistry. Lectures. *Three hours.* Professor VAUGHAN.

HYGIENE.

The courses in hygiene given by Professor MOSHER are designed primarily for students of the Department of Literature, Science, and the Arts.

FIRST SEMESTER.

1. Hygiene, Personal. Lectures. *Three hours.* Professor MOSHER.

SECOND SEMESTER.

2. Hygiene, Domestic and Municipal. Lectures. *Three hours.* Professor MOSHER.

ASTRONOMY.

A knowledge of logarithms and of spherical trigonometry is required for all courses in astronomy except 1 and 2. In Course 3, however, a short review of spherical trigonometry is given.

FIRST SEMESTER.

1. General Astronomy. *Three hours.* Professor HALL.
Course 1 requires a knowledge of plane trigonometry.
3. Spherical Astronomy, including Transformation of Coordinates, Precession, Nutation, Aberration, Refraction, and Parallax. *Three hours.* Mr. TOWNLEY.
Course 3 must be preceded by Course 1 or its equivalent. A knowledge of calculus is also required.
5. Practical Exercises in Computing. *Three hours.* Professor HALL.
6. Theory and Computation of Parabolic Orbits. Correction of Orbits. *Five hours.* Professor HALL.
Course 6 should be preceded by Course 16 in mathematics.

EITHER FIRST OR SECOND SEMESTER.

2. Elementary Practical Course. *One hour.* Mr. TOWNLEY.
Course 2 requires a knowledge of trigonometry and of general astronomy.
4. Practical Astronomy. Use of sextant and portable transit. *Three hours.* Mr. TOWNLEY.
Course 4 requires a knowledge of differential and integral calculus.
9. Extended Practical Course. *Credit arranged with instructors.* Professor HALL and Mr. TOWNLEY.
Course 9 is open only to such students as receive special permission.

SECOND SEMESTER.

7. Theory and Computation of Elliptic Orbits. Theory of Special Perturbation. *Five hours.* Professor HALL.
Course 7 should be preceded by Course 16 in mathematics.
8. Spherical Astronomy. Continuation of Course 3, including Theory and Computation of Eclipses and Theory of Instruments. *Three hours.* Mr. TOWNLEY.
10. Lectures with collateral reading on Recent Progress in Astrophysical Astronomy. *One hour.* Mr. TOWNLEY.
11. Mathematical Theories of Planetary Motions. *Three hours.* Professor HALL.

MINERALOGY.

FIRST SEMESTER.

1. Short Course. Lectures and practice. *Two hours.* Professor PETTEE.
For Course 1 an elementary knowledge of chemistry is desirable.
It is also given in the second semester.

3. Advanced work along such lines as may be agreed upon. *Credit arranged with instructor.* Professor PETTEE.
Course 3 must be preceded by Course 1 or by Course 2.
4. Determinative Mineralogy, including blowpipe analysis. Laboratory work. *Two hours.* Professor PETTEE.
Course 4 must be preceded by Course 1 or by Course 2. It requires a knowledge of the elements of analytical chemistry.

SECOND SEMESTER.

1. Short Course. Lectures and practice. *Two hours.* Professor PETTEE.
See note to Course 1 in first semester.
2. Mineralogy and Lithology. Lectures and practice. *Five hours.* Professor PETTEE.
- 3a. Advanced work along such lines as may be agreed upon. *Credit arranged with instructor.* Professor PETTEE.
Course 3a must be preceded by Course 1 or by Course 2.

GEOLOGY.

Courses 1, 2, 7, and 10 are intended primarily for undergraduates. Courses 3, 4, 5, and 6 are for graduate students and undergraduates who have had sufficient preparation to pursue them with advantage. Special courses will be arranged for graduates by either Professor PETTEE or Professor RUSSELL.

FIRST SEMESTER.

1. Elements of Geology—lithological, structural, and dynamical. Lectures and recitations. *Three hours.* Professor RUSSELL.
3. General Palæontology. Invertebrates. Reading, lectures, and laboratory work. *Three hours.* Professor RUSSELL.
Course 3 requires a knowledge of the elements of general geology.
5. Physical Geology. Lectures and studies of special subjects. *Two hours.* Professor RUSSELL.
Course 5 must be preceded by Courses 1 and 2, or an equivalent.
7. Physical Geography. Lectures and conferences on the origin and life-histories of the physical features of the United States. Lantern illustrations. Reviews of works of geography and travel. *Three hours.* Professor RUSSELL.
8. Economic Geology. *Two hours.* Professor PETTEE.
Course 8 must be preceded by Course 1 or Course 2 in mineralogy.

- [9. Geology of the United States. *Two hours.* Professor PETTEE.
Course 9 is omitted in 1896-97.]

SECOND SEMESTER.

2. Elements of Geology. Historical Geology. Lectures and recitations. *Three hours.* Professor RUSSELL.
4. Palæontological Investigations. Laboratory work, with reading and such instruction as the student may require. This course may be elected as 4a, *two hours*; 4b, *three hours*; or 4c, *five hours.* Professor RUSSELL.
6. Physical and Glacial Geology. *Two hours.* Professor RUSSELL.
Course 6 must be preceded by Course 5.
10. Physical Geography. Continuation of Course 7. Lectures and conferences on the relations of geography and climate, distribution of plants and animals, development of man, etc. Lantern views. Reviews of works of geography and travel. *Three hours.* Professor RUSSELL.

GENERAL BIOLOGY.

FIRST SEMESTER.

1. Elements of Biology. A study of typical species of plants and animals with reference to structure, function, development, and relationship. Lectures and laboratory work. *Five hours.* Professor SPALDING and Assistant Professor WORCESTER.
See note to Course 1 in zoology and to Course 1 in botany.

SECOND SEMESTER.

2. Elements of Biology. Continuation of Course 1. Lectures and laboratory work. In botany, the laboratory work is on flowerless plants to gymnosperms; in zoology, one section studies invertebrate types, and a second section studies a vertebrate type (frog). *Six hours.* Assistant Professors WORCESTER and NEWCOMBE and Dr. LILLIE.
Course 2 must be preceded by Course 1. See also note to Courses 1a and 1b in zoology and to Course 2 in botany.

BOTANY.

As introductory to the work in botany, all students are required to take a semester, and are advised to take a year, in general biology.

Courses 1, 2, 5, and 6 are intended primarily for undergraduates; Courses 3, 4, 7, 8, 10, and 12 are for graduates and undergraduates; Courses 9, 11, 13, and 14 are primarily for graduates, but undergraduates may be admitted to them by special permission.

FIRST SEMESTER.

1. Elements of Biology [Plant Life]. A study of the properties and activities of protoplasm, developmental history, differentiation and evolution of structure and function, and relation to the environment. The material for study is selected chiefly from algae and fungi. Lectures and laboratory work. *Three hours.* Professor SPALDING.

Course 1 is equivalent to the botanical part of Course 1 in general biology.

3. Cell Morphology and Physiology. The application of finer methods and biological research; cell structure, organization, and activity; mitosis; heredity; the cell theory. Lectures and laboratory work. *Five hours.* Assistant Professor NEWCOMBE.

5. Elements of Structural Botany. Special attention is given to the microscopic structure of crude drugs and food substances, and to the detection of adulterations. Laboratory work and demonstrations. *Two hours.* Assistant Professor SCHLOTTERBECK.

Course 5 is arranged primarily for students in the School of Pharmacy.

7. Morphology and Physiology of Fungi. Lectures, laboratory work, and reports. *Five hours.* Professor SPALDING.

9. Investigations in Morphology and Physiology. This course may be elected as *9a, three hours; 9b, five hours; 9c, eight hours; or 9d, ten hours.* Professor SPALDING and Assistant Professor NEWCOMBE.

11. Current Literature of Botany. *One hour.* Professor SPALDING.

Course 11 constitutes a journal club, in which important papers on botany are reviewed and discussed by the instructors and advanced students. All students are admitted to the meetings, but only advanced students may elect the course.

SECOND SEMESTER.

2. Elements of Biology [Plant Life]. A continuation of Course 1, embracing the alternation of generations and general biology and physiology of liverworts, mosses, ferns, and gymnosperms. Lectures and laboratory work. *Three hours.* Assistant Professor NEWCOMBE.

Course 2 is equivalent to the botanical part of Course 2 in general biology.

4. Experimental Physiology. A laboratory study of the relation of plants to their environment, as manifested by the phenomena of nutrition, growth, and irritability. This course may be elected as *4a, three hours; or 4b, five hours.* Assistant Professor NEWCOMBE.

6. Elements of Structural Botany. Continuation of Course 5. Lectures and laboratory work. *Three hours.* Assistant Professor SCHLOTTERBECK.
8. Morphology of Phanerogams. A laboratory study of one or more flowering plants, including developmental history, especially that of the flower and embryo, and the processes of pollination and fertilization. *Three hours.* Miss LANGDON.
10. History, Theories, and Problems of Plant Morphology. Lectures reviewing the development of botanical science, theories of the origin, distribution, and classification of species, and the present status of experimental morphology. *One hour.* Professor SPALDING.
12. Reports on subjects of investigation assigned in connection with Course 10. *Two hours.* Professor SPALDING.
Course 12 must be preceded or accompanied by Course 10.
13. Investigations in Morphology and Physiology. This course may be elected as 14a, *three hours*; 14b, *five hours*; 14c, *eight hours*; or 14d, *ten hours.* Professor SPALDING and Assistant Professor NEWCOMBE.
14. Current Literature of Botany. Continuation of Course 11. *One hour.* Professor SPALDING.
See note to Course 11 in first semester.

ZOOLOGY.

As introductory to the work in zoology all students are required to take a semester, and are advised to take a year, in general biology.

Course 1b should accompany Course 1a or its equivalent in Course 2 in general biology. The student should then take either Course 2, which is planned to meet the needs of teachers, or Courses 4, 5, 8, and 9, which meet the needs of prospective medical students as well as those of teachers. Courses 6, 7, 17, and 19 may be taken with advantage, and in the order named, at any time after Course 1b. Course 3 may be taken at any time. Courses 11, 16, and 21 are for teachers. Courses 12, 13, 14, and 15 are primarily for graduates.

FIRST SEMESTER.

1. Elements of Biology [Animal Life]. A study of protoplasm, of the cell and its activities, and of the structure, development, and biology of animal types selected to illustrate general principles. Lectures and laboratory work. *Three hours.* Assistant Professor WORCESTER.

Course 1 is equivalent to the zoological part of Course 1 in general biology.

2. Morphology of Invertebrates. Lectures, conferences, and demonstrations. *Five hours.* Dr. LILLIE.
Course 2 aims to complete the work in invertebrate zoology begun in the courses in general biology. It is arranged for those who mean to teach, but may be taken with advantage by others.
- [4. Mammalian Anatomy. Dissection of the cat. Bones; abdominal and thoracic viscera; central nervous system; sense organs. Laboratory work, lectures, and quizzes. In the laboratory work the class uses type-written copies of a descriptive anatomy of the cat prepared by Professor REIGHARD. *Five hours.*
Course 4 is omitted in 1896-97.]
6. Vertebrate Histology. Lectures and laboratory work, with instruction in methods. *Five hours.* Assistant Professor HUBER.
Course 6 must be preceded or accompanied by Course 1 in general biology and by Course 1b in zoology or its equivalent in Course 2 in general biology.
9. Comparative Embryology of Vertebrates. Lectures and laboratory work on fish (*Coregonus*), amphibian (*Amblystoma*), the chick, and rabbit. *Six hours.* Professor REIGHARD.
Course 9 is most advantageously taken after Courses 4 and 5, but may follow directly after the courses in general biology. It must be preceded by Course 1b or its equivalent in Course 2 in general biology.
12. Current Literature of Zoology. *One hour.* Professor REIGHARD.
In Course 12 the instructors and advanced students form a journal club which holds weekly meetings. Reports are made on important current papers and are followed by informal discussion. Although the meetings are open to all, the membership is restricted.
14. Research work in Zoology. Work may be arranged upon the gross anatomy, the microscopic anatomy, or the development of vertebrates or invertebrates, or upon experimental zoology. Application should be made to Professor REIGHARD, but the work may be carried on under the direction of other members of the zoological staff.
16. Museum Work. Students desiring to carry on systematic work on special groups represented in the University Museum, will be given every opportunity to do so, but must first satisfy the instructor in charge of their fitness to pursue the work. *Credit arranged with instructor.* Assistant Professor WORCESTER.

SECOND SEMESTER.

- 1a. Elements of Biology [Animal Life]. Continuation of Course 1. A study of typical species of *invertebrates* with reference to structure,

development, and relationship. Lectures and laboratory work. *Three hours.* Assistant Professor WORCESTER.

Course 1*a* is equivalent to the zoological part (Section I) of Course 2 in general biology.

- 1*b*. The Structure and Development of a Typical Vertebrate (the frog), an introduction to Vertebrate Morphology. *Three hours.* Dr. LILLIE.

Course 1*b* is equivalent to the zoological part (Section II) of Course 2 in general biology. It is pre-requisite for the courses in vertebrate anatomy and embryology.

3. The Evolution of Species. An historical and critical account of current theories, serving as an introduction to zoology. Illustrated lectures. *Two hours.* Professor REIGHARD.
- [5. Mammalian Anatomy. Continuation of Course 4. Dissection of the cat. The bones with special reference to muscular attachments; muscles; peripheral nerves; blood vessels. *Five hours.* Course 5 is omitted in 1896-97.]
7. Vertebrate Histology. Laboratory work and lectures. *Five hours.* Assistant Professor HUBER.
Course 7 covers the same ground as Course 6.
8. Comparative Anatomy of Vertebrates. Lectures and laboratory work on selected forms (Amphioxus, Petromyzon, Raja, Perca, Amblystoma, Alligator, Columba) carried on by means of type-written directions. *Six hours.* Professor REIGHARD.
10. Experimental Morphology. Lectures reviewing recent experimental work in embryology and showing the bearing of the results on theories of heredity. *One hour.* Dr. LILLIE.
- 10*a*. Experimental Morphology. Lectures and laboratory work. *Three hours.* Dr. LILLIE.
Course 10*a* is the same as Course 10 with the addition of laboratory work. It is open only to those who receive special permission.
11. Field Club. Excursions and laboratory work, with occasional lectures. The work consists of the collection, identification, preservation, and study of specimens of the local fauna. *Three hours.* Assistant Professor WORCESTER and Dr. LILLIE.
13. Current Literature of Zoology. Continuation of Course 12. *One hour.* Professor REIGHARD.
15. Research Work in Zoology. Continuation of Course 14. This course may be elected as 15*a*, *two hours*; 15*b*, *three hours*; 15*c*, *five hours*; 15*d*, *ten hours*; or 15*e*, *fifteen hours.* Professor REIGHARD.
17. Methods of Vertebrate Histology. Laboratory work with reading. *Two hours.* Assistant Professor HUBER.

19. The Microscopic Anatomy of the Brain and Special Sense Organs of Vertebrates (especially Man). Laboratory work. *Five hours.* Assistant Professor HUBER.
Courses 17 and 19 must be preceded by Course 6 or Course 7.
Course 19 should also be preceded by a course in embryology.
21. Museum Work. Continuation of Course 16. *Credit arranged with instructor.* Assistant Professor WORCESTER.

HUMAN ANATOMY.

No courses in human anatomy are give in this department of the University; but students may elect courses in human anatomy in the Department of Medicine and Surgery, and receive credit therefor towards the bachelor's degree, provided they receive special permission from the deans of the two departments.

FIRST SEMESTER.

1. Osteology. Lectures and demonstrations. *Two hours.* Dr. YUTZY.
2. Descriptive Anatomy. Lectures. *Two hours.* Professor McMURRICH.
4. Anatomy of Nervous System. Lectures. *Two hours.* Professor McMURRICH.

It is desirable that Course 4 should be preceded by Courses 2 and 3.

EITHER FIRST OR SECOND SEMESTER.

5. Practical Anatomy. Laboratory work. *Four hours.* Professor McMURRICH, Assistant Professor W. A. CAMPBELL, and Dr. YUTZY.
6. Practical Anatomy. Laboratory work. *Four hours.* Professor McMURRICH, Assistant Professor W. A. CAMPBELL, and Dr. YUTZY.

Courses 5 and 6 are both required in order to complete the laboratory work in human anatomy. Classes are formed three times a year and each course requires the attendance of the student every day for twelve weeks.

SECOND SEMESTER.

3. Descriptive Anatomy. Continuation of Course 2. Lectures. *Two hours.* Professor McMURRICH.

PHYSIOLOGY.

The courses in physiology are arranged for those who intend to become physicians or dentists, those who propose to teach the subject, and those who contemplate making biology or physiology a specialty.

Instruction is given by lectures, recitations, informal discussions, and laboratory work. In the laboratory the student learns to use the apparatus and methods employed in ordinary physiological experiments. Advanced students are given an opportunity to begin research work.

Work in physiology should be preceded by the following courses or their equivalents, viz.: Courses 4 and 5 in zoology, or a course in descriptive and practical human anatomy, and lectures and laboratory work in vertebrate histology in the Department of Medicine and Surgery, Courses 1 and 2 in physics, Courses 1, 2, and 5 in general chemistry, and Course 10 in organic chemistry.

FIRST SEMESTER.

1. Lectures and Recitations. *Five hours.* Professor LOMBARD.

SECOND SEMESTER.

2. Continuation of Course 1. Lectures and recitations. *Five hours.* Professor LOMBARD.
3. Laboratory Work. *Two hours.* Professor LOMBARD.
Course 3 is open only to students who have taken or are taking Course 2.
4. Physiological Experimentation. Teachers' course. *One hour.* Professor LOMBARD.
Course 4 is open to those who have taken Course 3.
5. Physiological Experimentation. Research work. *Two hours.* Professor LOMBARD.

DRAWING.

FIRST SEMESTER.

1. Elementary Drawing. Practice. Three sections. *Two hours.* Mr. GOULDING.
3. Mechanical Drawing. Text-book and practice. *Three hours.* Professor DENISON.
4. Free-hand Drawing; Pen and Ink Drawing; Sketching. *Three hours.* Professor DENISON and Miss HUNT.
9. Sketching of parts of Machines; Lettering. *Three hours.* Professor DENISON and Mr. WRENTMORE.
Course 9 is designed especially for students of mechanical engineering.
10. Continuation of Course 8. *Two hours.* Professor DENISON and Miss HUNT.
Course 10 must be preceded by Courses 4 and 8.
13. Water Color drawing. *Three hours.* Professor DENISON and Miss HUNT.
Course 13 must be preceded by Course 8. It can be taken only by special permission.

SECOND SEMESTER.

5. Descriptive Geometry. Recitations and drawing. Five sections. *Three hours.* Professor DENISON, Mr. WRENTMORE, and Mr. GOULDING.
Course 5 must be preceded by Course 1.
6. Shades, Shadows, and Perspective. *Three hours.* Professor DENISON.
Course 6 must be preceded by Course 5.
7. Free-Hand Drawing (advanced). *Three hours.* Professor DENISON and Miss HUNT.
8. Architectural and Water-Color Drawing. *Two hours.* Professor DENISON and Miss HUNT.
Course 8 must be preceded by Course 1 or 4.
14. Stereotomy. *Two hours.* Professor DENISON.
Course 14 must be preceded by Course 5.
16. Free-Hand Lettering. *Two hours.* Mr. WRENTMORE.
Course 16 must be preceded by Course 1.

SURVEYING, CIVIL ENGINEERING, MECHANICAL ENGINEERING, ELECTRICAL ENGINEERING, MARINE ENGINEERING, AND MINING ENGINEERING.

The courses in these subjects are open on certain conditions to students of the Department of Literature, Science, and the Arts, but they are arranged primarily for students in the Department of Engineering, and will be found described in the chapter on that department (pages 139 to 142).

COURSES IN PROFESSIONAL STUDY.

In some of the subjects taught in this department of the University, the instruction is substantially identical with that given in the professional schools. A student in this department, therefore, by making a proper choice of electives, may qualify himself for advanced standing in professional study; and, under certain conditions explained below, he may elect, as a part of the requirements for a bachelor's degree, some of the courses given in another department. By this arrangement, and with the cooperation of the faculties of the several departments, opportunity is afforded to reduce by a year (or, possibly, in medicine by two years)

the time required for earning both a collegiate and a professional degree.

COMBINED COURSE IN COLLEGIATE AND MEDICAL STUDIES.

The subjects included in the first two years of the curriculum of the Department of Medicine and Surgery are, with the exception of electrotherapeutics, all provided for in the Courses of Instruction enumerated on the preceding pages (80 to 97). The character and the extent of the instruction in these subjects are not, however, in all cases identical in the two departments. The following scheme is, therefore, given to show which of the courses offered in the Department of Literature, Science, and the Arts, are accepted in the Department of Medicine and Surgery as covering the requirements in the corresponding courses given in that department.

FIRST YEAR.

Medical Courses.

Anatomy and Osteology,
General Chemistry,
Organic Chemistry,
Laboratory Chemistry,
Physics,
Bacteriology,
Histology,

Literary Courses.

Human Anatomy: Courses 1, 2, 3, 5.*
General Chemistry: Courses 1, 2.
Organic Chemistry: Course 28.
Analytical Chemistry: Course 3.
Physics: Course 1.
Bacteriology: Courses 2, 3.
Zoology: Course 6 or 7.

SECOND YEAR.

Medical Courses.

Anatomy,
Physiology,
Hygiene,
Embryology,
Physiological Chemistry,

Literary Courses.

Human Anatomy: Courses 4, 6.
Physiology: Courses 1, 2.
Hygiene: Courses 1, 1a.†
Zoology: Course 9.
Physiological Chemistry: Courses 6, 7.

A student who intends to pursue the study of medicine after taking his bachelor's degree may shorten his total period of residence at the University by electing, as an undergraduate, the courses above named as accepted in the Department of Medicine and Surgery; the precise amount of time gained depending upon the amount of the required medical work he may be able to complete. If he wishes to arrange his work in such a way as, after receiving his bachelor's degree, to secure

*Course 4 in Zoology is accepted in place of Human Anatomy 1; and Course 8 in Zoology is accepted in place of Human Anatomy 2 and 3.

†The courses conducted by Professor VAUGHAN are here indicated.

admission to the third year of the medical course, and to earn the two degrees in six years of study, he must complete all the above-named accepted courses before taking his first degree; and he must also make his intention known to the President of the University as early as the beginning of his last year of undergraduate work, and obtain special permission to be registered as a student in medicine.

While the opportunity to combine collegiate and medical work is open to all students in this department of the University, it is probable that a course of study which leads to the degree of Bachelor of Science (see page 104) will be most attractive to those who intend also to take the degree of Doctor of Medicine.

A student who aims to earn the two degrees, Bachelor of Science and Doctor of Medicine, in six years will find it necessary to arrange his studies with this end in view from the beginning of his first year of residence at the University. The amount of work prescribed for the two degrees is sufficient to fill nearly all the student's time, leaving only a small number of hours free for electives. To enable such a student to plan his work intelligently and systematically, a scheme of study, covering four years, is here given. The scheme does not represent a complete prescribed course, nor the only course possible, but it is intended to show an order in which the prescribed studies may be taken to advantage. Some elective work in addition will be needed to satisfy the requirements for the bachelor's degree.

Students who wish to take advantage of the opportunity here offered for combining collegiate and medical work should consult frequently after the first year with a committee appointed to consider questions arising in this connection. This committee at present consists of Professor NOVY and Assistant Professor HUBER.

FIRST YEAR.

First Semester: French, four hours; German, four hours; English, Course 1, two hours; Mathematics, three hours; General Chemistry, Course 1, three hours.

Second Semester: French or German, four hours; Mathematics, four hours; Physics, Course 1, five hours; General Chemistry, three hours.

SECOND YEAR.

First Semester: English, Course 1a, two hours; Analytical Chemistry, Course 3, five hours; General Biology, Course 1, five hours; Bacteriology, Course 2, three hours.

Second Semester: Organic Chemistry, Course 28, four hours; General Biology, Course 2, five hours (not needed except by students who wish to take Courses 8 and 9 in Zoology); Bacteriology, Course 3, five hours.

THIRD YEAR.

Italics indicate medical courses

First Semester: Hygiene, Course 1, three hours; *Osteology* (Human Anatomy, Course 1, two hours; or Zoology, Course 4, five hours;) *Embryology* (Zoology, Course 9, six hours; or the medical course in *Embryology*, for which, however, no credit is given toward the degree of Bachelor of Science); *General Anatomy* (Human Anatomy, Course 2, two hours; to be omitted, if Course 8 in Zoology is taken in second semester).

Second Semester: Hygiene, Course 1a, two hours; *Histology* (Zoology, Course 7, five hours); *General Anatomy* (Human Anatomy, Course 3, two hours; or, in place of Courses 2 and 3 in Human Anatomy, Course 8 in Zoology, six hours).

FOURTH YEAR.

First Semester: Physiological Chemistry, Course 7, five hours; *Anatomy of Nervous System* (Human Anatomy, Course 4, two hours); *Practical Anatomy* (Human Anatomy, Course 5, four hours); Physiology, Course 1, five hours.

Second Semester: Physiological Chemistry, Course 6, three hours; *Practical Anatomy* (Human Anatomy, Course 6, four hours); Physiology, Course 2, five hours; the medical courses in *Regional and Surgical Anatomy* and in *Electrotherapeutics*, for which, however, no credit is given toward the degree of Bachelor of Science.

COMBINED COURSE IN COLLEGIATE AND LAW STUDIES.

In order that the collegiate work and the work in law may be successfully combined, it is necessary that a student enrolled in the Department of Literature, Science, and the Arts, should complete, before the close of his fourth year of residence, Course 1 in International Law (page 78); Course 19 in History: Constitutional Law and Political Institutions of the United States (page 71); Course 15 in Philosophy: Political Philosophy (page 73); and at least *twenty hours* of work selected from the following courses, all of which, however, are strongly recommended as a desirable preparation for the study of law:—

In History: Courses 3, 4, 14, 15, 21, and 22, embracing the constitutional history of England, the political and constitutional history of the United States, English constitutional law, and comparative constitutional law.

In Political Economy and Sociology: Courses 3, 4, 5, 9, 19, and 22, embracing the history of the development of industrial society, problems in political economy, principles of the science of finance, money and banking, and principles and problems in sociology.

In Philosophy: Courses 1a, 1b, 2a, and 2b, embracing the elements of logic and psychology.

From the courses above enumerated the Faculty of the Department of Law will accept an amount represented by *ten hours* of credit as a substitute for the law courses in Elementary Law, Elementary Real Property, Constitutional Law, Private International Law, and the Science of Jurisprudence.

It will furthermore be necessary for the student in the Department of Literature, Science, and the Arts, to complete, before the close of his fourth year of residence, the courses offered in the Department of Law in the subjects of Contracts, Torts, Domestic Relations (including Husband and Wife), and Personal Property. On the completion of these courses credit toward graduation to the extent of *fifteen hours* will be given in the Department of Literature, Science, and the Arts.

To be entitled to the privilege of entering upon the combined course a student must have at least *ninety hours* to his credit as a candidate for a collegiate degree.

The work of students who receive permission to enter upon this combined course is under the supervision of a special joint committee, consisting for the current year of Professors ADAMS, McLAUGHLIN, HUTCHINS, and KNOWLTON, and Assistant Professor LLOYD. This committee also has supervision of the work of students enrolled in the Department of Law who receive permission to take extra work of a collegiate character.

REQUIREMENTS FOR GRADUATION.

[For the Higher Degrees, see the chapter on the Graduate School, page 116.]

Different lines of study lead to the degrees of Bachelor of Arts, Bachelor of Philosophy, Bachelor of Science, and Bachelor of Letters. The several degrees may be earned either on the credit system, or on the university system. A description of the latter is given on page 105. The requirements for graduation on the credit system are as follows:

GRADUATION ON THE CREDIT SYSTEM.

On the credit system, the Faculty recommend for graduation students who have secured a stated number of *Hours of Credit*, according to the requirements specified below,—a part of the subjects being prescribed and a part being chosen by the student. An *Hour of Credit* is ordinarily given for the satisfactory completion of work equivalent to

one exercise a week during one semester, whether in recitations, laboratory work, or lectures. Lectures and recitations are usually one hour in length; but in courses of study that involve laboratory work, drawing, or other practical exercises, a longer attendance than one hour at an exercise is required in order to secure an hour of credit.

The courses enumerated are more fully described in the section on Courses of Instruction, pages 53 to 98.

THE DEGREE OF BACHELOR OF ARTS.

To obtain the recommendation of the Faculty for the degree of Bachelor of Arts, the student must secure *one hundred and twenty Hours of Credit*. The prescribed portion of this work is as follows:

In Greek: Courses 1, 2, 3, 4, and either 5*a* or 5*b*.

In Latin: Courses 1, 2, 3, 4.

In French: Courses 1, 2.

In English: Courses 1, 2.

In Philosophy: Course 1.

In Mathematics: Courses 1*a*, 2*a*, 3*a*, 4*a*.*

But after a student has completed Courses 1, 2, 3 in Greek, 1, 2 in Latin, and 1*a*, 2*a*, or an equivalent, in mathematics, he may at his option, discontinue the study of any one of these three subjects. From the other courses offered he must choose and complete enough to secure in all *one hundred and twenty Hours of Credit*.

THE DEGREE OF BACHELOR OF PHILOSOPHY.

To obtain the recommendation of the Faculty for the degree of Bachelor of Philosophy, the student must secure *one hundred and twenty Hours of Credit*. The prescribed portion of this work is as follows:

In Latin: Course 1, 2, 3, 4.

In French: (*a*) for those who enter without French, sixteen hours, including Courses 1, 2;

or (*b*) for those who entered with French, eight hours of advanced work.

In German: (*a*) for those who entered without German, sixteen hours, including Courses 1, 2, and options in Courses 3, 4;

or (*b*) for those who entered with German, eight hours taken from options in Courses 3, 4.

In English: Courses 1, 2.

In Philosophy: Course 1.

* See first foot-note on page 104.

In Mathematics: Courses 1a, 2a, 3a, 4a.*

But after a student has completed Courses 1, 2 in Latin, 1a, 2a, or an equivalent, in mathematics, and eight hours in German (if he entered without German) or Courses 1 and 2 in French (if he entered without French), he may, at his option, discontinue the study of Latin, or mathematics, or the modern language (French or German) which he began in the University. From the other courses offered he must choose and complete enough to secure in all *one hundred and twenty Hours of Credit*.

THE DEGREE OF BACHELOR OF SCIENCE.†

To obtain the recommendation of the Faculty for the degree of Bachelor of Science, the student must secure *one hundred and twenty Hours of Credit*. The prescribed portion of this work is as follows:

In French: (a) for those who entered without French, eight hours;
or (b) for those who entered with the two-year requirement in French, four hours of advanced work.

In German: (a) for those who entered without German, eight hours;
or (b) for those who entered with the two-year requirement in German, four hours, taken from options in Course 3.

In English: Courses 1, 1a.

In Mathematics: Courses 1a, 2a, or an equivalent.

In Physics: Course 1.

In General Chemistry: (a) for those who entered without chemistry, Course 1 and Course 2 or 5;
or (b) for those who entered with chemistry, Course 2 or 5.

In General Biology: Course 1.

In addition to the foregoing the student must secure credit to the amount of *thirty hours* in some subject or subjects designated as his Chief Study. The Chief Study must be chosen from one of the following departments of instruction (or from two of these departments, if permission is first obtained from the heads of the two departments to divide the work between them): Astronomy, Botany, Chemistry, Geology, Hygiene, Mathematics, Mineralogy, Physics, Physiology, Zoology. The student is advised to consult early in his course with the head of the department in which he proposes to take his Chief Study.

From the other courses offered the student must choose and complete enough to secure in all *one hundred and twenty Hours of Credit*.

*Instead of these courses the student is permitted to take other courses in mathematics of equivalent amount.

†Students enrolled in previous years as candidates for the degree of Bachelor of Science in *general science*, in *chemistry*, or in *biology*, may continue on those lines, if they so desire, and receive the degree on completion of the requirements published in the Calendar for 1895-96, pages 105 to 107.

THE DEGREE OF BACHELOR OF LETTERS.

To obtain the recommendation of the Faculty for the degree of Bachelor of Letters, the student must secure *one hundred and twenty Hours of Credit*. The prescribed portion of this work is as follows:

In French: (a) for those who entered without French, sixteen hours, including Courses 1, 2;

or (b) for those who entered with French, eight hours of advanced work.

In German: (a) for those who entered without German, sixteen hours, including Courses 1, 2, and options in Courses 3, 4;

or (b) for those who entered with German, eight hours taken from options in Courses 3, 4.

In English: Courses 1, 2, 3, 4.

In History: Courses 1, 2.

In Philosophy: Course 1.

In Mathematics: Course 1a.

But after a student has completed Courses 1, 2 in French (if he entered without French) and Courses 1, 2, in German (if he entered without German), he may at his option, discontinue either of these two subjects. From the other courses offered he must choose and complete enough to secure in all *one hundred and twenty Hours of Credit*.

GRADUATION ON THE UNIVERSITY SYSTEM.

1. The privileges of the university system are open to undergraduates who have completed their second year of residence, and have also secured at least sixty Hours of Credit, including all the prescribed work that can be taken in the first two years for some one of the bachelor's degrees.

2. Before beginning his work each undergraduate student must make application to the Registrar, and receive from him a certificate that he is entitled to enter upon the work. This application must be made before the student enters on the work of his third year of collegiate residence. In cases of exceptional character, however, the Faculty may grant permission to begin work on this system at a later date.

3. Students who are working on the university system are not held to the completion of a fixed number of hours of work, but are required to pursue three distinct lines of study, one *major study* and two *minor studies*, and at the close of the work, to pass a special examination on those

studies. The committee in charge of any undergraduate's work may, however, at their option, accept in lieu of the final examination in a minor study, approved work, in the line of that study or germane to it, done on the credit system, equivalent to one-fourth of the amount of work remaining to be completed by the student before graduation, if he had continued on the credit system. Members of the graduating class who have completed all the prescribed portions of the requirements for graduation, and who have not more than thirty hours of work to complete in their last year of residence, are allowed to take, in place of one-half the amount remaining to be completed, a major study on the university system; or, in place of all the amount remaining, a line of special work approved and directed by the Administrative Council of the Graduate School.

4. The work of students carrying on their studies on the university system is supervised by committees of the Faculty. The members of the committee in each case consist of the professors in charge of the student's work, the professor in charge of the major study being chairman. On making his application to the Registrar, each student is directed to the proper committee.

5. Students on the university system are subject to all the rules of the Department relating to attendance and to examinations. No student can be excused from any work that he has once entered upon, nor from any examination, without the consent of the instructor in charge of the work. Examinations passed at the close of each semester on ordinary class work do not count as an equivalent or in abatement of the final examination to be passed for a degree, except as provided above in paragraph 3.

6. Undergraduates who have been enrolled as candidates on the university system for at least three semesters, may be admitted to a special examination for a bachelor's degree at a date not earlier than the end of three and a

half years of residence at the University. Before being recommended for any bachelor's degree, however, they must have completed all the courses prescribed for that degree. The examination will be conducted by the regular committee and such other persons as they may ask to assist them.

TEACHER'S DIPLOMA AND TEACHER'S CERTIFICATE.

The aims of the University in providing instruction in the Science and the Art of Teaching, are as follows:

1. To fit University students for the higher positions in the public school service.
2. To promote the study of educational science.
3. To teach the history of education, and of educational systems and doctrines.
4. To secure to teaching the rights, prerogatives, and advantages of a profession.
5. To give a more perfect unity to our State educational system by bringing the secondary schools into closer relations with the University.

TEACHER'S DIPLOMA.

A Teacher's Diploma is given to a student at the time he receives a bachelor's degree, provided he has completed three courses of study offered by the professor of the science and the art of teaching, viz., Courses 1 and 2 and some three-hour course, and, also, at least one of the Teachers' Courses offered by professors of other branches. The Diploma is also given to a graduate student at the time of receiving a master's or a doctor's degree, provided he has pursued teaching as a major or minor study and has also taken a Teachers' Course in some other department.

TEACHER'S CERTIFICATE.

By authority of an act of the State Legislature, passed in 1891, the Faculty of this Department give a Teacher's Certificate to any person who takes a bachelor's, master's, or doctor's degree and also receives a Teacher's Diploma as provided above. By the terms of the act, the certificate given by the Faculty "shall serve as a legal certificate of qualification to teach in any of the schools of this State, when a copy thereof shall have been filed or recorded in the office of the legal examining officer or officers of the county, township, city, or district."

FELLOWSHIPS AND SCHOLARSHIPS.

ELISHA JONES CLASSICAL FELLOWSHIP.

In 1889 the Elisha Jones Classical Fellowship was established by Mrs. Catherine E. Jones, in memory of her husband, Professor Elisha Jones, a graduate of this University in the class of 1859, and for many years a member of the Literary Faculty. Its purpose is "to encourage patient, honest, accurate study of the languages, literature, and archæology of ancient Greece and Rome." Its present income is \$500 a year.

A candidate for this Fellowship must have spent at least three entire semesters as a student in this Department of the University and must be a Bachelor of Arts of this University, of not more than two years' standing. Appointments to the Fellowship are made by an Examining Board, consisting of President ANGELL and Professors D'OOGHE, KELSEY, WALTER, and HUDSON. The period of incumbency is limited to two academic years, and must be spent at this University "unless at any time the examining board shall see fit to allow the second year to be spent" at some other place favorable to classical study.

The present holder of the Fellowship is Mary Gilmore Williams, A.B.

DETROIT HIGH SCHOOL SCHOLARSHIPS.

The alumni of the Detroit High School have established several scholarships open to graduates of that school. The first steps toward raising a fund for this purpose were taken in 1891; and a corporation has since been formed under the title of the Detroit High School Scholarship Fund Association.* Five students now enjoy the benefit of the fund. Eight of the beneficiaries have received degrees at the University. One of the scholarships is known as the Mary C Leete Memorial Scholarship, in memory of a teacher who died in 1894.

SAGINAW HIGH SCHOOL SCHOLARSHIPS.

Four scholarships, with an annual income of two hundred and fifty dollars each, established by Mr Arthur Hill, of Saginaw, W. S., and known as the John Moore, the Wells-Stone, the Alonzo L. Bingham, and the Otto Roeser scholarships, are open to graduates of the Saginaw High School.

* The State Legislature in 1893 passed an act providing "that five or more persons of full age, residing in the State of Michigan, may associate and incorporate themselves together for the purpose of establishing scholarships in the University of Michigan, for the benefit of graduates of the high schools of this State." A corporation organized in accordance with the provisions of this act "shall be under the general management of not less than five nor more than fifteen trustees," and "shall, in law and equity, be capable of taking and receiving real and personal estate not exceeding one hundred thousand dollars in the aggregate, for the purpose of its incorporation."

SCHOLARSHIP OF THE CLASS OF 1894.

The Class of 1894 has established a scholarship fund, but the proceeds of the fund are not yet available.

SETH HARRISON SCHOLARSHIP FUND.

The Seth Harrison Scholarship Fund was established, in memory of her father, by Mrs. Clara Harrison Stranahan, of Brooklyn, N. Y. The principal of the fund is twenty-five thousand dollars. The income is to be used, on conditions specified in the covenant between Mrs. Stranahan and the Board of Regents, for the benefit of descendants of Seth Harrison who may be pursuing studies in the Department of Literature, Science, and the Arts of the University of Michigan, whenever applicants properly qualified present themselves. Provision is made, however, for applying the income of the fund to scholarships for other persons, "if at any time there shall be a period of seven years during which there are no qualified applicants," descendants of Seth Harrison.

THE PHILLIPS SCHOLARSHIPS.

The late Henry Phillips, Jr., of Philadelphia, Pa., made provision in his will for the establishment and maintenance of six scholarships, to be known as The Phillips Scholarships, in the department of Literature, Science, and the Arts of the University of Michigan. By the terms of the will these scholarships are to be open only to candidates for the degree of Bachelor of Arts, who excel in the Greek and Latin studies required for admission to the University; and they are to be awarded by a committee consisting of the President of the University, the Dean of the Department, the senior professor of Greek, and the senior professor of Latin.

GRAND RAPIDS HIGH SCHOOL SCHOLARSHIPS.

The High School Scholarship Association of Grand Rapids is a body incorporated under the State law, for the purpose of assisting graduates of the Grand Rapids High School to secure a college education in the Department of Literature, Science, and the Arts of the University of Michigan.

FELLOWSHIP IN CLASSICS.

The sum of three hundred dollars has been given by Mr. F. D. Bennett, of Jackson, for the support of a graduate fellowship in classics for the year 1896-97.

SCHOLARSHIP IN AMERICAN HISTORY.

The sum of one hundred and fifty dollars a year has been given by Mr. Clarence M. Burton, of Detroit, for the support of a scholarship in American History for the years 1896-98.

RULES AND REGULATIONS OF THE DEPARTMENT.

The following rules and regulations relate to admission conditions, election of studies, examinations, work in other departments, attendance, and discipline.

ADMISSION CONDITIONS.

All students are regarded as strictly on probation, until they have removed all conditions incurred in the examinations for admission to the Department. All such conditions must be removed during the year following the date of the examination. Students who have any admission conditions outstanding at the beginning of their second year of residence will not be allowed to join their classes until such conditions are removed.

ELECTION OF STUDIES.

I. The maximum number of hours a week a student may elect without special permission of the Faculty is sixteen, but a student will do well to limit himself to the fifteen hours a week necessary to complete a course in four years.

In cases of exceptional proficiency additional hours are granted by the Faculty on special request; but in all cases requests for permission to take an additional number of hours must be made in writing on a blank form provided by the Registrar, and must be deposited in the Registrar's box on or before the *first Monday* of the semester during which the additional work is desired.

N. B. Students who are making up preparatory studies in the Ann Arbor High School are required to deduct the time spent in that school from the maximum number of hours allowed them in the University.

II. For students in their first year the following schemes are recommended, or such parts of them as may be needed in making up a suitable amount of work.

1. For candidates for the degree of Bachelor of Arts:

First Semester: Greek, four hours; Latin, three hours; Mathematics, three hours; French, four hours; English, two hours.

Second Semester: Greek, four hours; Latin, four hours; Mathematics, four hours; French, four hours.

2. For candidates for the degree of Bachelor of Philosophy:

First Semester: Latin, three hours; Mathematics, three hours; French and German, eight hours; English, two hours.

Second Semester: Latin, four hours; Mathematics, four hours; French and German, eight hours.

3. For candidates for the degree of Bachelor of Science:

First Semester: Mathematics, three hours; French or German, four hours; English, two hours; General Chemistry, three hours; other studies, three or four hours.

Second Semester: Mathematics, four hours; French or German, four hours; Physics, five hours; General Chemistry or English, two or three hours.

4. For candidates for the degree of Bachelor of Letters:

First Semester: Mathematics, three hours; French, four hours; German, four hours; History or other studies, five hours.

Second Semester: French, four hours; German, four hours; English, two hours; History or other studies, six hours.

III. Except as provided in (I) and (II) each student may elect his studies and may pursue them in any order he may choose, subject only to the following restrictions:

a. Before entering on any study the student must give the professor in charge satisfactory evidence that he is prepared to pursue it with advantage.

b. If he is a candidate for a degree, he must at some time take all the studies "prescribed" for the degree he seeks.

c. No student will be allowed to elect merely a part of a course without special permission of the Faculty.

d. No credit will be allowed to a student for work in any course, unless the election of the work is formally made and reported to the Registrar before the work is begun.

e. After the second Monday of each semester no study can be taken up or dropped without special permission of the Faculty. All requests for permission to take up or to drop studies must be made in writing and must be in accordance with the rules printed on the blank forms provided for this purpose.

f. The Faculty will require a student to drop a part of his work at any time, if in their opinion he is undertaking too much; or to take additional work if they think he is not sufficiently employed.

g. The Faculty reserve the right to withdraw the offer of any study not chosen by at least six persons.

IV. After matriculation a student cannot, without special permission of the Faculty, be admitted to examination in any one of the courses given, until he has received in the University the regular instruction in such course.

V. The student is urged to make his choice of studies with care, and with reference to some plan. The members of the Faculty will be ready to give advice and assistance in this regard.

VI. Students expecting to graduate in any given year must report to

the Registrar at the opening of the year and ascertain what prescribed work, if any, is still lacking for the degree sought.

EXAMINATIONS.

1. All students of this Department, whether candidates for a degree or not, if at work on the credit system, are required to attend all the examinations in the courses of study they pursue.

2. No student absent from any regular examination in any course of study that he may have pursued, will be allowed to take such omitted examination before the next regular examination in that course. In cases of great urgency, however, the Faculty may grant students special permission to be examined at an earlier date.

3. No student whose examination in any course is reported as "*Incomplete*," will receive credit for that course until after the examination has been completed. In case, however, the examination be not completed within one year, the unfinished course will be regarded and treated as "*Not Passed*."

4. Any student reported as passed "*Conditionally*" in any course, must remove the condition within one year from the date of the examination in which it was incurred; otherwise, the course passed conditionally will be regarded and treated as "*Not Passed*."

5. Any student reported as "*Not Passed*" in any course, will receive no credit for that course until he has again pursued it as a regular class exercise and has passed the regular examination in the same.

RELATION TO OTHER DEPARTMENTS.

1. Candidates for a degree in this Department of the University, who wish to pursue studies in any other department, may be granted that privilege, provided they lack, at the beginning of the academic year, no more than sixteen hours of graduation and take no more than eight hours of work in any given semester in this Department in connection with the semester's work in the other department.

2. All students admitted from other departments of the University to the privileges of this Department are regarded in the class room as members of this Department, and are required to pass the regular examinations with the classes in which they are enrolled. Violations of this requirement will be deemed a forfeiture of the privileges of this Department; but this rule is not to be interpreted as applying to those who are permitted to attend lectures or other exercises without being enrolled.

ATTENDANCE AND DISCIPLINE.

The State of Michigan extends the privileges of the University, with only moderate charges, to all persons of either sex, who are qualified for

admission. Thus it does not receive patronage, but is itself the patron of those who seek its privileges and its honors. It cannot, however, be the patron of idleness or dissipation. Its crowded classes have no room except for those who assiduously pursue the studies of their choice, and are willing to be governed in their conduct by the rules of propriety.

Students not in their places at the opening of the semester must present written excuses from their parents or guardians for the delay.

Students are not allowed to absent themselves from town without permission from the President.

Such delinquencies as tardiness, absence, deficiencies, and offences against good order, in the several departments of instruction, are ordinarily dealt with by the instructor in charge of the department in which they occur. Flagrant cases are reported to the Faculty for adjudication.

Students are suspended or dismissed, whenever in the opinion of the Faculty they are pursuing a course of conduct seriously detrimental to themselves or the University.

The following is a By-Law of the Regents:

"Whenever any Faculty is satisfied that a student is not fulfilling, or likely to fulfil, the purpose of his residence at the University, or is for any cause an unfit member thereof, the President shall notify his parents or guardians, that they may have an opportunity to withdraw him, and if not withdrawn within a reasonable time he shall be dismissed."

FEES AND EXPENSES.*

Matriculation Fee.—For Michigan students, *ten dollars*; for all others, *twenty-five dollars*.

Annual Fee.—For Michigan students, *thirty dollars*; for all others, *forty dollars*.

Diploma Fee.—For all alike, *ten dollars*. A fee of *one dollar* is charged for the Teacher's Diploma.

For laboratory fees and other expenses, see page 36.

* The Matriculation Fee and the Annual Fee must be paid in advance. No portion of the fees can be refunded, except by order of the Board of Regents, to students who leave the University during the academic year.

Graduate School.

A special Announcement giving additional information in regard to the Graduate School was issued in the summer of 1896. Copies of this Announcement can be had by addressing Mr. James H. Wade, Steward of the University.

The Graduate School is organized within the Department of Literature, Science, and the Arts. Its management is entrusted to an Administrative Council, consisting of the President of the University, the professors and junior professors in the Faculty of the Department, and such other persons as may be elected to membership. The purpose of the school is to bring into greater prominence the numerous advanced courses of instruction that have been developed from the continual extension of the elective system; to secure a more efficient and systematic administration of this higher work; and to provide as far as possible for the separate instruction of graduate students.

ADMISSION AND REGISTRATION.

All applicants for admission to the Graduate School must first report to the Dean of the Department of Literature, Science, and the Arts, and present their credentials. They will then be referred to the Secretary of the Administrative Council, for the arrangement of courses of study.

The privileges of the school are open to graduates of the Department of Literature, Science, and the Arts of this University, and to graduates of other universities and colleges, who satisfy the Administrative Council that they are qualified to pursue with profit the advanced courses of study offered in the school.

Graduates of institutions where the undergraduate courses of study are not substantially equivalent to the course prescribed at this University, will ordinarily be required to do an additional amount of undergraduate work, or to prolong their term of residence, before being admitted to full candidacy for a higher degree.

Graduates of this University, or of other institutions, who do not wish to become candidates for a degree, may be admitted and registered as special resident graduates.

Graduates of other institutions who are candidates for a bachelor's degree in the Department of Literature, Science, and the Arts, are not registered in the Graduate School.

COURSE OF INSTRUCTION.

The courses of instruction offered in the Department of Literature, Science, and the Arts, and described on pages 53 to 98 are all open to graduate students who satisfy the professors in charge that they are qualified to pursue the work to advantage. In all branches of study provision is made for the instruction of graduate students.

The work of candidates for a higher degree is not confined strictly to the courses referred to above. Each student chooses three lines of study, a major study and two minor studies, which, after approval by the Council, he pursues under the immediate supervision of a special committee, consisting of the professors in charge of the studies chosen, the professor in charge of the major study being chairman. The nature of the work prescribed, and of the committee's oversight, varies in different cases according to the subjects chosen, the degree sought, and the previous attainments of the student. The work may consist of attendance upon certain specified courses, or of reading to be done privately and reported upon, or of an original research to be carried on more or less independently. In general, the method followed is that of the so-called university system, described on page 105, with modifications as circumstances may make advisable. The essential features of this system are specialization of study, a final examination, and a thesis. A thesis is always required of a candidate for a doctor's degree and of a non-resident candidate for a master's degree; for a master's degree in residence, the requirement may be waived at the discretion of the committee in charge of the student's work. The final examination for a degree is conducted under the direction of the committee, and the result of the examination is reported to the Faculty of the Department of Literature, Science, and the Arts.

REQUIREMENTS FOR GRADUATION.

The degrees conferred on the completion of approved courses of study in the Graduate School are those of Master of Arts, Master of Philosophy, Master of Science, Master of Letters, Doctor of Philosophy, and Doctor of Science.

THE MASTER'S DEGREES.

The masters' degrees are open to Bachelors of Arts, Philosophy, Science, or Letters, of this University, or of any other reputable university or college. A residence of at least one year at this University is required, except as stated below.

Residents.—A student who has received a bachelor's degree may be recommended for the corresponding master's degree after completing the prescribed term of residence, and passing an examination on his course of study as approved by the Administrative Council. A thesis may, or may not, be included in the requirements for the degree, as the committee in charge of the student's work may determine.

A student properly qualified may be permitted to pursue at the same time studies for a master's degree, and studies in any of the professional schools, on condition that the term of study and residence in the Graduate School be extended to cover at least two years.

Non-Residents.—A Bachelor of Arts, Bachelor of Philosophy, Bachelor of Science, or Bachelor of Letters, of this University, who has already completed a portion of the term of residence prescribed for a master's degree, may be allowed to continue his studies for the degree without further residence at the University, on such conditions as the Administrative Council may determine in each case. *This privilege is restricted to graduates of this University.*

THE DOCTORS' DEGREES.

1. The degree of Doctor of Philosophy is open to all persons who have received a bachelor's degree; those persons, however, who pursue studies along scientific lines, may at their option receive the degree of Doctor of Science; but no student will be accepted as a candidate for the doctor's degree who has not a knowledge of French and German sufficient for purposes of research.

2. It is not intended that the doctor's degree shall be won merely by faithful and industrious work for a prescribed time in some assigned course of study, and no definite term of required residence can be specified. As a rule, three years of graduate study will be necessary, the last two semesters of which must be spent at this University. The period of three years, however, may be shortened in the case of students who, as

undergraduates, have pursued special studies in the direction of their proposed graduate work.

3. No student will be enrolled as a candidate for a doctor's degree until he has been in residence as a graduate student for at least one year. [This rule may be waived in the case of those who come properly accredited from a Graduate School of some other University, and of those who, as undergraduates in this University, have shown special proficiency in the line of their proposed graduate work.]

4. A student wishing to become a candidate for a doctor's degree must make a formal application to be so enrolled at least two semesters prior to the time of presenting himself for examination.

5. A candidate for a doctor's degree must take a major study that is substantially co-extensive with some one department of instruction in the University. He must also take two minor studies, one of which may be in the same department as the major, but involving a more thorough treatment of the same. Both minors must be cognate to the major, and all studies must be subject to the approval of the Administrative Council.

6. THE THESIS.—The thesis is of great importance. It must exhibit creditable literary workmanship and a good command of the resources of expression; but it must depend for acceptance more upon its subject-matter than upon its formal or rhetorical qualities. It must be an original contribution to scholarship or scientific knowledge. The inquiry should be confined within narrow bounds. The treatment should be as concise as the nature of the matter permits, and show familiarity with the history of the problem treated, with the literature bearing upon it, and with the latest methods of research applicable to it. Every thesis should contain a clear introductory statement of what it is proposed to establish or to investigate, and likewise a final resumé of results. It should also be accompanied by an index of contents and a bibliography of the subject. It is expected that the preparation of an acceptable thesis will usually require the greater part of one academic year.

SPECIAL REGULATIONS RELATING TO THE HIGHER DEGREES.

1. Applicants for an advanced degree are required to announce to the Council, through the Secretary, as early as the fifteenth of October of each year, the particular branches of study to which they wish to give special attention. The supervision of their work will then be entrusted to the proper committee.

2. The subject of the thesis for a doctor's degree must be chosen, and must be approved by the committee concerned, as early as the first of November of the college year in which the applicant expects to take the degree; and the subject of the thesis for a master's degree, when required, must be chosen and approved as early as the first of December.

3. The thesis must be completed and put into the hands of the chairman of the proper committee as early as the first of May of the year in which the applicant expects to take the degree.

4. The thesis must be prepared for close scrutiny with reference not only to its technical merits, but also to its merits as a specimen of literary workmanship. It must be preceded by an analytical table of contents and a carefully prepared account of the authorities made use of.

5. The thesis must be read and defended in public at such time as the Council may appoint, and, in case of a master's degree, a bound copy, either written or printed must be deposited in the University library.

6. Candidates for the degree of Doctor of Philosophy or Doctor of Science, in case of the acceptance of their theses, are required to have the accepted theses printed in full or in part as may be approved by the responsible committee, and to present twenty-five copies to the University library. To guarantee the printing of the thesis, every candidate for the doctor's degree will be required to deposit with the Treasurer of the University, between the date of the acceptance of his thesis and the time fixed for his examination, the sum of fifty dollars, which deposit will be returned to him in case of failure to pass his examination, or whenever he shall cause his thesis to be printed at his own expense, or shall have it published in a form and under auspices approved by the responsible committee.

In the printing of the thesis at his own expense, the candidate will be expected to use good substantial paper and slightly typography. A page four inches by six, with outside margins of at least one inch, is recommended.

FEES AND EXPENSES.*

Matriculation Fee.—For Michigan students, *ten dollars*; for all others, *twenty-five dollars*.

Annual Fee.—For Michigan students, *thirty dollars*; for all others, *forty dollars*. The annual fee required of all graduates who are granted the privilege of pursuing studies for a master's degree *in absentia*, is *ten dollars*.

Diploma Fee.—For all alike, *ten dollars*. A fee of *one dollar* is charged for the Teacher's Diploma.

For laboratory fees and other expenses, see page 36.

* The Matriculation Fee and the Annual Fee must be paid in advance. No portion of the fees can be refunded, except by order of the Board of Regents, to students who leave the University during the academic year.

Department of Engineering.

A special Announcement giving information in regard to this Department, and containing a register of alumni with present occupations and addresses, so far as known, has been published. Copies of this Announcement can be obtained by addressing Secretary James H. Wade or Professor Charles E. Greene, Dean of the Department of Engineering, Ann Arbor, Michigan.

In the legislative act under which the University was organized in 1837, provision was made for instruction in engineering. Work was begun in this line in 1853, and the first degrees were conferred in 1860. The engineering courses were included in the Department of Literature, Science, and the Arts, until the close of the collegiate year 1894-95. At that time the Department of Engineering was established by the Board of Regents.

Persons who wish to become professional engineers are offered here thorough courses of study in civil, mechanical, and electrical engineering. The work extends through four years. The aim of the Department is to lay a foundation of sound theory, sufficiently broad and deep to enable its graduates to enter understandingly on the further investigation of the several specialties of the profession; and at the same time to impart such a knowledge of the usual professional practice as shall make its students useful in any position to which they may be called. While the adaption of theory to practice can be thoroughly learned only by experience, there are many matters in which the routine work of an engineering field party, office, or drafting room can be carried out on a greater or less scale in a

training school. The technical branches are under the direct care of those who have had professional experience as well as a full scientific training, and in all particulars the courses embody as close an imitation of the requirements of active labor as the instructors who have the several branches in charge can devise.

The college year extends from the first day of October to the Thursday following the last Wednesday in June.

REQUIREMENTS FOR ADMISSION.

[For admission to advanced standing, see page 123.]

[For admission of students not candidates for a degree, see page 125.]

Candidates for admission must be at least sixteen years of age, and must present satisfactory evidence of good moral character. They must bring credentials from their last instructor, or from the last institution with which they have been connected.

Unless admitted on diploma from an approved school (see page 126), any student who desires to become a candidate for a degree must pass examinations in the subjects described below. Before entering upon the examination each applicant must present his credentials to the Dean of the Department at his office in the Engineering Building. Certificates and diplomas from schools other than those officially examined by the University, as specified on page 126, will not excuse an applicant from admission examinations.

Students who have satisfied any one of the four groups of requirements for admission to the Department of Literature, Science, and the Arts (see pages 39 to 45) will be admitted upon completing the requirements in Plane Trigonometry and (after 1897) in Chemistry.

ADMISSION OF CANDIDATES FOR A DEGREE.

[For changes in the requirements that go into effect in 1898, see page 123.]

The subjects on which applicants for admission in 1897 to any of the courses leading to a degree in engineering will be examined are as follows:

English Language.—*Grammar.*—Selections for analysis and parsing will be set, arranged to test the applicant's knowledge of the leading facts of English Grammar. To meet this requirement, a review of the subject should be had during the last year of the preparatory course.

Composition and Rhetoric.—The purpose of the examination in composition is to test the applicant's ability to write good English. To this end he will be asked to write two essays of not less than two hundred words each, one upon a subject drawn from books he has read, and the other upon a subject drawn from his experience or observation. The language of these essays must be grammatical and clear. The spelling, punctuation, and capitalizing must be correct. The applicant must show ability to discriminate in the use of words and to construct well-organized sentences and paragraphs. A topical outline should accompany each essay.

The requirement in English Language is identical with the requirement in English for admission to the Department of Literature, Science, and the Arts. For further suggestions regarding preparation, and for lists of books from which subjects for composition will be chosen, see page 40.

English Literature.—Daily recitations for at least one year will be requisite. Stopford A. Brooke's English Literature (edition of 1896), or any other manual, may be used for an outline of the subject. As much time as practicable should be given to the careful reading of representative authors in each period.

Mathematics.*—*Algebra.*—Fundamental Rules, Fractions, Simple Equations, Involution and Evolution, the Calculus of Radicals, and Quadratic Equations, as given in Olney's Complete School Algebra, or an equivalent in other authors.

Geometry.—Beman and Smith's Plane and Solid Geometry, or an equivalent in other authors.

Trigonometry.—Plane Trigonometry as given in Olney's Elements of Trigonometry, or an equivalent in other authors.

N. B.—It is very desirable that High Schools whose graduates are received on diploma arrange their courses so as to include a portion of both algebra and geometry in their last preparatory year. Students who do not come from diploma schools should take a similar review if they expect to succeed in the study of mathematics in the University.

Physics.—An amount represented by Carhart and Chute's Elements of Physics. Laboratory work in physics is urgently advised, though not required; but students who have completed a course in laboratory prac-

*Students entering at the beginning of the second semester (February 21, 1898), should be prepared in the mathematics of the first semester in addition to the other requirements for admission.

tice, may expect to derive advantage from it if they take work in the physical laboratory in the University (see page 135).

History.—Myers's General History, or an equivalent; and the History of the United States as far as the close of the Revolutionary War.

Chemistry, Geology, Zoology, Physiology, Physical Geography, and Astronomy.—The applicant may offer any *two* of these subjects. The requirements, intended to cover a half year's work in each subject, are as follows:

Chemistry.—Freer's Elementary Chemistry, or an equivalent amount in Remsen's Introduction to the Study of Chemistry.

Geology.—Winchell's Geological Studies.

Zoology.—Packard's Zoology, Briefer Course, or Nicholson's Manual of Zoology.

Physiology.—Martin's The Human Body, Briefer Course.

Physical Geography.—Tarr's Elementary Physical Geography, especially chapters 9 to 21 inclusive, or an equivalent.

Astronomy.—Newcomb and Holden's Astronomy, Briefer Course, Young's Elementary Astronomy, or an equivalent. A knowledge of the principal constellations is required.

French, German, or Latin.—Applicants may offer French, German, or Latin, one of these three languages being required. The requirements in each are as follows:

French.—The whole subject of French Grammar. The applicant will be expected to read at sight easy French, and to translate correctly into French simple English sentences. Two years ought to be given to this study, the first year being spent on the grammar, and the second devoted to reading good modern French, accompanied by grammatical analysis and exercises in writing. The texts read should be chiefly narrative and conversational prose; modern, rather than classic, dramas should be read.

German.—(1) Ability to pronounce German correctly and to read it fluently with the proper intonations. (2) Thorough familiarity with the every-day facts of the grammar, to be evidenced by putting illustrative English phrases and sentences into German. (3) Sufficient miscellaneous prose reading—say four hundred pages—so that the applicant will be able to construe at sight, and put into good English, a passage of moderately difficult German prose, either narrative or dialogue. (4) A careful study of one classical drama, Schiller's Tell being recommended.

Latin.—Jones's First Latin Book, or an equivalent amount in any other introductory text-book, four books of Caesar's Gallic War, and one of the orations of Cicero. It is expected that at least two years will be given to preparation in Latin.

Requirements for Admission in 1898 and Thereafter.

In 1898, and thereafter, applicants for admission to the Department of Engineering will be examined in the several subjects as follows:

In **English Language**, in **English Literature**, in **Mathematics**, in **Physics**, and in **French, German, or Latin**, the requirements will be the same as in the year 1897.

In **History** the requirement will be: Myers's General History and one year's work in United States History and Civil Government. Johnston's or McLaughlin's History of the United States and Fiske's Civil Government or Hinsdale's American Government are recommended as textbooks.

In **Chemistry** the requirement will cover one year's work. As a textbook, Freer's Elementary Chemistry, or an equivalent amount of work in Remsen's Introduction to Chemistry, is recommended. In either case the text should be accompanied by laboratory work.

Botany, Physical Geography, or Astronomy.—The applicant may offer any *one* of these subjects. The requirements, intended to cover a half-year's work in each subject, are as follows:

Botany.—Practical exercises in the study of common plants, so conducted as to secure a familiar acquaintance with the essential facts of vegetable morphology, physiology, and relationship. The method pursued in Spalding's Introduction to Botany, or in Bergen's Elements of Botany, will indicate the kind of work desired.

Physical Geography.—Tarr's Elementary Physical Geography, especially chapters 9 to 21 inclusive, or an equivalent.

Astronomy.—Newcomb and Holden's Astronomy, Briefer Course, Young's Elements of Astronomy, or an equivalent. A knowledge of the principal constellations is required.

ADMISSION TO ADVANCED STANDING.

1. Graduates of the Department of Literature, Science, and the Arts of this University, or of any other reputable college, are admitted without examination to advanced standing as candidates for a degree in engineering, and are held only to the completion of the special requirements for graduation in the several courses (see page 143). These requirements can be completed in two years, or, possibly, in a single year, if the student takes as electives, while an undergraduate, some of the courses open to him in the

Department of Engineering. A knowledge of differential and integral calculus, of analytical mechanics, of elementary drawing, and of descriptive geometry, is needful for the advanced work.

2. Students who have completed at least one year's college work in an approved college, and who bring explicit and official certificates describing their course of study and scholarship, and testifying to their good character, will be admitted to advanced standing without examination, except such as may be necessary to determine what credit they are to receive for work done in the college from which they have come.

3. Students who have not completed at least one year's college work in an approved college, but who, previously to entering this department of the University, have pursued studies beyond those required for admission, may be admitted to advanced standing on passing the regular entrance examinations, and examinations in such undergraduate studies as they may ask to be credited with in advance.

4. Rules relating to admission to advanced standing:

a. Credits must be secured before the fifteenth of December or (if the candidate be matriculated after that date) before the tenth of April.

b. No credits will be given for advanced standing after the dates named in (*a*).

c. An account once closed cannot be reopened without special permission of the Faculty.

d. All students, whether candidates for a degree or not, who apply for advanced standing on the conditions stated in paragraphs (2) and (3) above, must present to the Dean a statement showing the amount of work done in the subjects in which credit is asked.

e. The application for advanced standing should be made to the Dean immediately after matriculation; and the Dean

will furnish a blank form for presentation to the professors in charge of the several subjects named in the blank.

ADMISSION OF STUDENTS NOT CANDIDATES FOR A DEGREE.

Persons who desire to pursue studies in this department, and do not desire to become candidates for a degree, are admitted on the following conditions:

1. All persons under twenty-one years of age must pass the regular entrance examinations.
2. Persons over twenty-one years of age must show that they have a good knowledge of English and are otherwise prepared to pursue profitably the studies they may desire to take up.
3. Should a student who enters under the preceding provision (2) subsequently become a candidate for graduation, he must pass the regular entrance examinations, at least one year previous to the time when he proposes to graduate.
4. Students not candidates for a degree who wish credit for studies pursued before admission are referred to the rules relating to advanced standing given above.
5. Students not candidates for a degree are expected to attend the lectures, recitations, and examinations in the branches prescribed for the regular students, and are required to take enough work to occupy them profitably.

TIMES OF EXAMINATIONS.

An examination for admission to the Department of Engineering will be held on Saturday and Monday, June 26 and 28, 1897, and another beginning on Thursday, September 23, and continuing through the Friday, Saturday, Monday, and Tuesday following. The examinations will begin at nine o'clock A. M. of each day. Applicants may take their examinations at either of these times, or may take a part in June and a part in September. In either case it is particularly desired that they present themselves on the first day of the examination.

The days and hours of examination are the same as those announced for the Department of Literature, Science, and Arts (see pages 47 and 48) so far as the subjects of examination on the same in the two departments.

ADMISSION ON DIPLOMA.

Students presenting graduation certificates from any of the schools approved by the Faculty of the Department of Literature, Science, and the Arts, are admitted without further examination to the Department of Engineering. Deficiencies in the requirements for admission must, however, be made up, or substitutions secured from the Dean; extra studies may be credited on advanced standing, if the subjects are taught in either of the two departments.

For the regulations that govern admission on diploma and the list of approved schools, see pages 48 to 54.

In addition to the schools included in the list mentioned above, the Manual Training School and the English High and Manual Training School, in Chicago, Ill., have been approved as qualified to prepare students for admission on diploma to the Department of Engineering, the term of approval expiring in 1897 in each case.

THE WORK OF THE DEPARTMENT.

The studies pursued in the earlier part of the course comprise, in *Mathematics*, algebra, trigonometry, analytic geometry, and the elements of differential and integral calculus; in *French* and *German*, an amount covering in all about a year and a half of study; in *English*, a course in higher English grammar and composition; in *Physics* and *Chemistry*, the study of the elementary principles; and in *Drawing*, practice in geometrical and in mechanical drawing, and in the study of descriptive geometry.

The more technical subjects are taken up in the latter part of the course. Some of these subjects are of equal value to all classes of engineering students, such as analytical and applied mechanics, the strength and resistance of materials, and the metallurgy of the useful metals, especially iron and steel; others are adapted more particularly to the wants of the special students in the several courses. Their general scope may be seen from the following descriptive outline.

DESCRIPTION OF COURSES.

1. **Drawing.**—A very complete course in mechanical drawing is given, embracing plane projection drawing, isometric drawing, descriptive geometry, and the elementary principles of coloring and shading, with original problems executed in the drawing room. Examples from numerical data are always given when suited to the conditions of the problem in hand. Students in mechanical engineering are required to sketch pieces of machinery, and afterwards to make working drawings suitable for use in the shop. The plans of surveys, plane-table work, maps, designs in engineering construction, and the thesis drawings naturally come under this head. Instruction is also given in free-hand drawing, topographical drawing, ornamentation and lettering, shades and shadows, linear perspective, and drawing for stone cutting. The work in drawing occupies the student a part of almost every day throughout the course.

2. **Surveying.**—The work in surveying covers one full year and includes text-book work, lectures, recitations, and field practice. The theory of instruments and all the operations of surveying, laying out work, and computing, are explained in detail, and each student is required to make plats or maps and the necessary calculations of actual surveys. A varied and ample supply of instruments is available for use. The classes have practice in steel-tape measurements, ranging lines, measuring angles, running levels and curves of various kinds, and the measurement of earthwork; they make surveys, traverse them, calculate contents, divide areas, and, in general, perform the work of highway, street, and railroad surveying. They are given practice in every step of topographical surveying and drawing. They make surveys with the transit and stadia, plane-table, photographic camera, and other instruments; they reduce the notes, develop and finish the pictures, plot the work, and make finished drawings of all field operations. They also determine the meridian and take observations for latitude. The work is done during the fall months.

In the month of June the class is taken into the field as a railroad party for a period of four weeks continuously, where, under competent supervision, it goes through all the field work for a projected line, up to the point of actual construction, such as reconnoissance, preliminary and location survey, cross-sectioning, staking out, contouring, and topography. Plans and profiles, carefully made in the field by the students from the notes of the party, complete this portion of the subject, and serve to fix the practical application of the principles obtained from the text-books and lectures. In the above work are usually included a plane-table survey, triangulation, and some hydrography when the selected locality is favorable.

Instruction by lecture, text-book, and recitation is given, covering the special field of city engineering, and pointing out its connection with, and dependence upon, other branches of engineering work. The city engineer's duties with respect to various matters of public concern are explained. Among the subjects treated in this connection are streets and their present uses; sewers; waterworks; public franchises; assessments; bridges; building inspection; fires; and lighting. The instruction is not technical, but, as the work of the modern city engineer covers a wide field of engineering, an attempt is made to present some of the controlling relationships and to supplement and apply to this service what is taught in other parts of the course.

The principal text-books used are Johnson's *Surveying*, Searle's *Field Engineering*, and Byrne's *Highway Construction*. All the more important books of reference are easily accessible to the student.

3. Strength and Resistance of Materials.—A course of recitations and lectures continuing through the first half-year is devoted to this subject, and is attended by all the engineering students. The action of the different materials under applied forces, the distribution of stress, and the proper proportions to be given to the different parts of structures in order that they may safely fulfil their several functions, are carefully studied.

Tests of wood, iron, steel, cement, and other building materials are made in the Engineering Laboratory.

4. Theory of Structures.—Roof and bridge trusses, in wood and iron; arches, in wood, iron, and stone; trestles; brick and stone masonry; foundations; tunnels; and, in general, the whole theory of structures are discussed. In this course, as in the preceding (3), Rankine's *Civil Engineering* is used as a text-book, supplemented by full explanations, additional notes, lectures, examples, and problems.

A complete course of instruction is also given in the graphical analysis of roof and bridge trusses and arches, as recently developed and applied. The student is made familiar with both the analytical and graphical methods of treatment and thus possesses ready proof of the accuracy of his calculations.

5. Hydraulics.—The law of the flow of water through orifices and pipes and over weirs; the gauging of streams and rivers; the designing of works for water supply, drainage, and sewerage; the laying out of canals; and the subject of river and harbor improvements are treated in this course.

6. Machinery, Prime Movers, and Millwork.—A course of instruction is given in mechanism, or the general principles of machinery, involving the study of gearing, screws, cranks, and levers, and the dynamics of machinery. In the study of prime movers, special attention is

given to turbine and other water motors, and to steam engines. In the theory of machine construction, problems involving the strength and design of machines, and the materials used in their construction, and also involving the application of the principles of electricity, are studied at length in connection with such examples as illustrate the best practice. The instruction in millwork covers the distribution of power and the arrangement of shafting and machinery in manufacturing establishments. Practical problems involving the strength of shafting, belting, and gearing are fully treated. Tests are made to determine the efficiency of machines, and the value of lubricants.

7. **Designs in Engineering and in Machine Construction.**—Contemporaneously with the study of theory students are required to work out problems in design. They are furnished with the usual data for a design, and the kind or type of structure or machine is indicated. They are then expected to make the necessary calculations, paying particular attention to proportioning the different parts so as to secure strength, simplicity, and effect, and to present at a specified date complete working drawings, giving full details, accompanied by bills of materials, estimates, and specifications.

8. A course in **Thermodynamics** embraces the study of the principles governing the action of heat engines in general, hot-air and gas engines, air compressors, compressed-air engines, and refrigerating apparatus.

9. **Steam Engineering.**—The work in this branch covers the practical use of steam. Furnaces and boilers are studied with reference to proper combustion of fuel; to securing maximum evaporative efficiency; and to proportioning the parts for strength, durability, and accessibility for cleaning and repairs. The care and management of engines and boilers, both in use and out of use, are fully considered. A study is made of the principal steam pumps and pumping engines. The practical application of steam to heating and ventilating purposes is treated by lectures, and by inspection of actual plants. Tests are made to determine the value of fuels, quality of steam, and the efficiency of furnaces, boilers, and engines.

10. **Shop Practice.**—Instruction is given in the principles governing the action of cutting tools and the principal machine and hand tools used in the shop. Lectures are given on pattern making, moulding, and founding, covering the principal features of each. A description of the engineering laboratory is given on page 131.

The *Shop Practice* in the various shops covers the application of principles previously studied. It comprises the actual manipulation of the tools used in working metal and wood, and in moulding. The student is required to do work in pattern making and moulding in green sand, in dry sand, and in loam, and to charge and have the management of

the cupola and brass furnace during the operations of casting. Careful attention is given to the operations of founding and to making composition metals for specific purposes. The student is also required to put in practice, at the blacksmith's forge, his knowledge of the elementary principles of forging, and to forge and temper his own cutting tools. By working with iron and steel of different qualities the student becomes familiar with all grades of these materials. Practice is also afforded in soldering, brazing, and steam-fitting. In connection with the practice there are courses in elementary and machine drawing.

Advanced work in the shops can also be taken by those who wish to become especially skilled in such lines, or who desire to fit themselves for instructors in Manual Training Schools and work shops of this character.

11. Marine Engineering and Naval Architecture.—The instruction in this branch comprises the study of marine steam engines and propelling instruments, the hydraulics of ship building, buoyancy, metacentre, stability and trim, weight and centre of gravity, waves and rolling, structural strength, speed and resistance, propulsion by sails and steam engines, laying-off and taking-off, and other topics.

12. Metallurgy.—A course of instruction by lectures and recitations is given upon the subjects of fuel, refractory material, iron, and steel. The lectures are illustrated by charts and drawings of furnaces and appliances used, and by samples of furnace products.

13. Electrical Engineering.—The special electrical courses, additional to the elementary study of the subject, are devoted to primary and secondary generators, electrometallurgy, electrical units and methods of measurement, dynamo-electric machinery, the alternate-current transformer, arc and glow lamps, photometry, and the distribution of electricity and transmission of power. In addition, elective courses in mathematical electricity are offered.

The laboratory work in electricity is devoted mainly to the testing of primary and secondary batteries, to practice in making electrical measurements of precision by all the best methods, to setting up dynamos, motors, and storage batteries, and testing them for efficiency, to the investigation of transformers for efficiency and for hysteresis curves, to photometry of both arc and glow lamps, and to special investigations connected with the preparation of a thesis.

14. Visits of Inspection.—As often as practicable, visits are paid to neighboring manufacturing establishments, and to electric-light and electric-power stations, for the purpose of acquiring a knowledge of the methods employed in building, in the construction of bridges, machinery, and ships, and the best practice in electrical manufacturing and engineering on a large scale.

EXAMINATIONS.

Examinations, usually in writing, are held at the end of each semester, but the classes are liable to be examined at any time, without notice, on any portion of their previous work.

FACILITIES FOR INSTRUCTION.

The collections for illustrating the instruction given comprise models, drawings, photographs, lithographs, and blue prints representing trusses, arches, and details of construction in iron, wood, and stone; also shapes of iron, working models of turbines and engines, and working drawings of a number of bridges. These collections are receiving additions from year to year, by gift and purchase, and are invaluable to the student.

Tests of engines and boilers, and of machinery in general, will be made on request, and the profit of such work devoted to extending the facilities of the engineering laboratory. The data of all experiments and tests made are kept in the laboratory records.

All the laboratory work is on a practical basis, and is done as nearly as possible as it would be done in any well arranged manufacturing establishment. There is a metallurgical laboratory connected with the chemical laboratory, amply supplied with assay furnaces and other appliances. The latest and best books on professional subjects are added yearly to the library, where they are accessible to all; and frequent references are made to them in the class room as the various subjects are brought forward.

PHYSICAL LABORATORY.

For a description of the physical laboratory, see page 27.

CHEMICAL LABORATORIES.

For a description of the chemical laboratories, see page 28.

ENGINEERING LABORATORY.

The Engineering Laboratory contains about 20,000 square feet of floor space. It is divided into rooms as follows:

The *Mechanical Laboratory*, 40 by 80 feet, is devoted to experimental work in connection with the testing of engines, boilers, pumps, indicators, belting, gearing, lubricants, and strength of materials, and to such original work as can be undertaken with advantage. The work also extends to the testing of engines, boilers, and water-wheels of neighboring mills and electric plants. The Knowles and the Gordon pumping engines at the City Water Works have been fitted up by the company

with especial reference to the convenience of engineering students in making tests. The equipment contains, among other things, a 100,000-pound Olsen testing machine; a 2,000-pound cement testing machine; Thurston and Ashcroft oil testing machines; a Stirling boiler for high pressure; a high speed automatic engine; a Corliss engine; a Rider hot-air engine; Wheeler and Wainright surface condensers; an Alden absorption dynamometer; a Giddings traction recording dynamometer; an Emerson power-scale; several other forms of dynamometers; a large, electrically driven chronograph, built in the laboratory; a 36-foot open mercury column; special apparatus for testing pressure and vacuum-gauges and indicator springs; gauges; indicators; thermometers; pyrometers; tachometers; standard weights; steam pumps and injectors; rotary and centrifugal pumps; water meters; water motors, including a special universal water motor, built in the laboratory, together with pressure tanks and pumps for testing motors; hydraulic rams; water-wheels; air-pumps; blowers; apparatus for making tests on radiators and pipe coverings; apparatus for furnace gas analysis; a street railway motor; and other apparatus having special reference to work of investigation.

The *Iron Room*, or machine shop, and the *Wood Room*, or pattern shop, each 40 by 80 feet, contain the tools and apparatus usually found in first-class establishments, including special tools built in the laboratory. The pattern loft, 40 by 80 feet, contains a fine collection of patterns made in the laboratory.

The *Forge Shop*, 30 by 40 feet, is equipped with twelve forges, built in the laboratory. The blast is supplied by a No. 4 Sturtevant pressure blower, and the smoke is carried by away a No. 31 exhaust fan.

The *Foundry*, 30 by 40 feet, contains a 27-inch cupola, brass furnaces, and a core-oven; the blast is supplied by a No. 3 Sturtevant pressure blower.

The central wing, 32 by 54 feet, contains, on the first floor, a well-ventilated wash-room, with closets and other conveniences, an engine room with a 10 by 30 Reynolds-Corliss engine, and superintendent's office; on the second floor a well-lighted drawing-room and a blue-print room. The basement and attic are used for storage. The tower, at an elevation of 75 feet, contains a tank of 100 barrels capacity for experimental work in hydraulics; also a mercury column and other apparatus.

New machinery is added to each shop from time to time for the accommodation of engineering students and others desiring instruction and practice in the use of tools for working in wood and metal. At the same time opportunity is afforded them to become familiar with the more common materials and forms of construction used in engineering structures, buildings, and machinery. In all work an effort is made to follow the practice of the best shops.

The instruction in all practical work is given by men of wide experience, selected for their mechanical skill.

OTHER LABORATORIES AND MUSEUMS.

For a description of other University laboratories, libraries, and collections for the study of art, archæology, ethnology, mineralogy, palæontology, zoology, etc., and for general information concerning the University, see pages 20 to 37.

THE ENGINEERING SOCIETY.

The Engineering Society, composed of and officered by students of this department, holds weekly meetings, at which papers of technical interest are read, and reports made upon observation and experiments. A reading room is maintained by the Society, accessible to all students of the department. Several engineers of prominence have spoken before the Society the past year. An annual, called the *Technic*, containing papers read before the Society, abstracts of theses, contributed articles from alumni, and other matters of professional interest, is published by the students.

COURSES OF INSTRUCTION.

The Courses of Instruction are subject to change from time to time; those announced for the year 1896-97 and required for graduation, as stated on pages 142 to 144, are described below, together with some technical elective courses which are designated accordingly. The amount of credit towards graduation assigned to each course is indicated by the expressions *one hour*, *two hours*, etc., an *hour of credit* being given for the satisfactory completion of work equivalent to one exercise a week during one semester. Lectures and recitations are usually one hour in length, but in laboratory work, drawing, and other practical exercises, a longer attendance is required in order to secure an hour of credit.

The courses given in the Department of Literature, Science, and the Arts, and described on pages 53 to 98, are (with the exception of the courses in French and in German,

for which special permission is required) all open as electives to engineering students who are qualified to pursue them with advantage.

A student must be qualified to pursue the several studies before he elects them. That restriction and interference of hours alone limit the order in which subjects may be elected. Courses which must precede a given study are enumerated just after that study in the pages that follow.

FRENCH.

FIRST SEMESTER.

- B. Narrative Prose. Two sections. *Two hours.* Mr. EFFINGER.
- D. Scientific Reading. *Two hours.* Mr. FRANÇOIS.

SECOND SEMESTER.

- A. Beginner's Course. Grammar and Reader. Two sections. *Four hours.* Mr. EFFINGER and Mr. FRANÇOIS.
- C. Descriptive Prose. *Two hours.* Mr. EFFINGER.

GERMAN.

FIRST SEMESTER.

- A. Beginner's Course. Thomas's German Grammar, Part 2, and a German Reader. Two sections. *Four hours.* Mr. LESSING.
- C. Descriptive Prose. *Two hours.* Mr. LESSING.

SECOND SEMESTER.

- B. Narrative Prose. Easy Stories. Two sections. *Two hours.* Mr. LESSING.
- D. Technical Prose. Schroot's *Der Dampf*. Two sections. *Two hours.* Mr. LESSING.

ENGLISH AND RHETORIC.

EITHER FIRST OR SECOND SEMESTER.

- I. Paragraph-Writing. Two sections. *Two hours.* Mr. STRAUSS.

MATHEMATICS.

Students of engineering are required to take in order Courses 1, 2, 3, 4, and 6. They are also required to take Course 1*b*, unless they have passed a satisfactory examination for admission in plane trigonometry,

but no credit toward graduation is given to engineering students for Course 1*b*.

FIRST SEMESTER.

1. Algebra and Analytic Geometry (I). Five sections. *Four hours.*
Mr. LYMAN, Mr. HALL, Mr. GODDARD, and Mr. COAR.
- 1*b*. Plane Trigonometry. Three sections. *Two hours.* Mr. GODDARD.
3. Calculus. Four sections. *Five hours.* Professor ZIWET, Mr. LYMAN, and Dr. GLOVER.
6. Calculus and Mechanics (II). Three sections. *Four hours.* Professor ZIWET and Mr. LYMAN.

SECOND SEMESTER.

2. Analytic Geometry (II). Five sections. *Four hours.* Mr. LYMAN, Mr. GODDARD, and Mr. COAR.
4. Calculus and Mechanics (I). Four sections. *Five hours.* Professor ZIWET, Mr. LYMAN, and Dr. GLOVER.

PHYSICS.

FIRST SEMESTER.

1. Mechanics, Sound, and Light. Lectures and recitations. *Five hours.* Dr. ST. JOHN.
For Course 1 a knowledge of plane trigonometry is indispensable.
3. Physical Laboratory Work for Beginners. This course may be elected as 3*a*, *three hours*; or 3*b*, *two hours*. Dr. GUTHE.
Course 3 must be preceded or accompanied by Course 1. It is also given in the second semester. Students presenting note-books from High School physical laboratories approved by this department, may be allowed three hours credit instead of two for Course 3*b*. Fee: for Course 3*a*, \$3; for 3*b*, \$2.
4. Primary and Secondary Batteries. Recitations and laboratory work. *Two hours.* Dr. GUTHE.
Course 4 must be preceded by Courses 1, 2, 3*a* or 3*b*, and a course in general or in analytical chemistry. Fee, \$1.
5. Electrical Measurements. Lectures, recitations, and laboratory work. *Four hours.* Professor CARHART, Assistant Professor PATTERSON, and Dr. GUTHE.
Course 5 must be preceded by Courses 1, 2, and 3*a* or 3*b*. A knowledge of calculus is also required. Fee, \$3.
7. Electricity and Magnetism: Mascart and Joubert. *Three hours.* Assistant Professor PATTERSON. (Elective.)
Course 7 must be preceded by Course 2. A knowledge of calculus is also required.

9. Theory of Heat: Preston. *Two hours.* Professor CARHART. (Elective.)

SECOND SEMESTER.

1. Mechanics, Sound, and Light. Lectures and recitations. *Five hours.* Dr. ST. JOHN.
For Course 1 a knowledge of plane trigonometry is indispensable.
2. Heat, Electricity, and Magnetism. *Five hours.* Professor CARHART and Assistant Professor PATTERSON.
Course 2 must be preceded by Course 1 and by a course in general or in analytical chemistry.
3. Physical Laboratory Work for Beginners. This course may be elected as *3a, three hours;* or *3b, two hours.* Assistant Professor PATTERSON and Dr. GUTHE.
See note to Course 3 in first semester.
8. Heat. Laboratory work. *Two hours.* Dr. GUTHE. (Elective.)
Course 8 must be preceded by Course 2a. Fee, \$2.
10. Electricity and Magnetism: Mascart and Joubert. *Two hours.* Assistant Professor PATTERSON.
Course 10 must be preceded by Course 7.
12. Electrical Measurements. Continuation of Course 5. Lectures and laboratory work. *Two hours.* Dr. GUTHE. Fee, \$2.
16. Chemical Physics. Electrochemistry. Theories of Solutions and Electrolytes, including the Osmotic Theory of the Voltaic Cell. Lectures and laboratory work. *Three hours.* Dr. GUTHE. (Elective.)
Course 16 must be preceded by Course 5 and by Courses 1 and 2 in chemistry. Fee, \$1.

CHEMISTRY.

FIRST SEMESTER.

1. Inorganic Chemistry, Descriptive and Experimental. Lectures and recitations. *Three hours.* Mr. HIGLEY.

EITHER FIRST OR SECOND SEMESTER.

2. Laboratory Work in General Inorganic Chemistry. *Three or more hours.* Mr. HIGLEY, Mr. LICHTY, and Dr. SHERMAN.
Course 2 must be preceded or accompanied by Course 1 or an equivalent. It is supplementary to Course 1 and covers in the laboratory the ground covered by lectures in Course 1.

SECOND SEMESTER.

3. Qualitative Analysis. Recitations and laboratory work. *Five hours.* Professor JOHNSON.

METALLURGY.

FIRST SEMESTER.

2. Micro-Metallography. The study of the microscopic structure of metals as related to their physical and chemical properties. Laboratory work with reading. *One hour.* Professor E. D. CAMPBELL. (Elective.)

Course 2 can be taken only by those who have taken Course 1 and who receive special permission.

SECOND SEMESTER.

1. Fuel and Refractory Material, Iron and Steel. *Three hours.* Professor E. D. CAMPBELL.

Course 1 must be preceded by Course 1 or Course 3 in chemistry.

ASTRONOMY.

FIRST SEMESTER.

5. Practical Exercises in Computing. *Three hours.* Professor HALL. (Elective.)

EITHER FIRST OR SECOND SEMESTER.

4. Practical Astronomy. Use of portable transit. *Three hours.* Mr. TOWNLEY.

Course 4 requires a knowledge of spherical trigonometry and of differential and integral calculus.

MINERALOGY.

EITHER FIRST OR SECOND SEMESTER.

1. Lectures and practice. *Two hours.* Professor PETTEE.
For Course 1 an elementary knowledge of chemistry is desirable.

DRAWING.

FIRST SEMESTER.

1. Elementary Drawing. Practice. Three sections. *Two hours.* Mr. GOULDING.
4. Free-Hand Drawing; Pen and Ink Drawing; Sketching. Four sections. *Three hours.* Professor DENISON, Mr. WRENTMORE, and Miss HUNT.
9. Sketching of Parts of Machines; Lettering. *Three hours.* Professor DENISON and Mr. WRENTMORE.
10. Continuation of Course 8. *Two hours.* Professor DENISON and Miss HUNT. (Elective.)

Course 10 must be preceded by Courses 4 and 8.

10

13. Water-Color Drawing. *Three hours.* Professor DENISON and Miss HUNT. (Elective.)
 Course 13 must be preceded by Course 8. It can be taken only by special permission.

SECOND SEMESTER.

5. Descriptive Geometry. Recitations and drawing. Five sections. *Three hours.* Professor DENISON, Mr. WRENTMORE, and Mr. GOULDING.
 Course 5 must be preceded by Course 1.
6. Shades, Shadows, and Perspective. *Three hours.* Professor DENISON.
 Course 6 must be preceded by Course 5.
7. Free-Hand Drawing (advanced). *Three hours.* Professor DENISON and Miss HUNT. (Elective.)
8. Architectural and Water-Color Drawing. *Two hours.* Professor DENISON and Miss HUNT. (Elective.)
 Course 8 must be preceded by Course 1 or 4.
14. Stereotomy. *Two hours.* Professor DENISON.
 Course 14 must be preceded by Course 5.
16. Free-Hand Lettering. *Two hours.* Mr. WRENTMORE. (Elective.)
 Course 16 must be preceded by Course 1.

SHOP PRACTICE.

All courses in shopwork are under the supervision of Superintendent C. G. TAYLOR, to whom application must be made for assignment to sections. Mr. TAYLOR also gives a few lectures on shopwork appliances and materials in each of the Courses 1a, 2a, 3a, and 4a. These courses may also be elected by advanced students as 1b, 2b, 3b, and 4b, the credit in each case being arranged with instructor.

Special arrangements will be made for students who desire to take more advanced work in the shop courses with a view to preparing themselves for teaching these subjects.

EITHER FIRST OR SECOND SEMESTER.

- 1a. Wood Work and Pattern Work. Four sections. *Three hours.* Mr. PURFIELD. Fee, \$5.
- 2a. Forging. Six sections. *Two hours.* Mr. ——. Fee, \$5.
- 3a. Foundry Work. Three sections. *Two hours.* Mr. WINSLOW. Fee, \$5.
- 4a. Iron Work. Three sections. *Three hours.* Mr. SMOOTS. Fee, \$5.

SURVEYING.

FIRST SEMESTER.

1. Lectures and Field Practice with Instruments. *Four hours.* Professor J. B. DAVIS.
The field practice in Course 1 continues during favorable weather until Christmas.
4. Use of Instruments. *One hour.* Professor J. B. DAVIS.
6. Continuation of Course 5. Phototopography. Field work and drawing. *One hour.* Professor J. B. DAVIS.
The ability to make photographic negatives will be of service.

SECOND SEMESTER.

2. Continuation of Course 1. Lectures and text-book. *Five hours.* Professor J. B. DAVIS.
Course 2 must be preceded by Course 1.
3. Field Work in Camp for Four Weeks. Professor J. B. DAVIS.
Except by special permission Course 3 is open only to students who are working for a degree in civil engineering.
5. Topography. Transit and Stadia. Plane Table. Field work and drawing. *Three hours.* Professor J. B. DAVIS.
Course 5 is given four times a week for thirteen weeks.
7. Geodesy. Geodetic Methods. Lectures and text-book. *Three hours.* Professor J. B. DAVIS. (Elective.)
Course 7 must be preceded by Courses 1 and 2. It is given five times a week for twelve weeks.

CIVIL ENGINEERING.

FIRST SEMESTER.

1. Municipal Engineering. Lectures and text-book. *Five hours.* Professor J. B. DAVIS. (Elective.)
4. Graphical Analysis of Structures. *Two hours.* Professor GREENE
Course 4 must be preceded by Course 3.
5. Strength and Resistance of Materials. Two sections. *Two hours.* Professor GREENE.
Course 5 must be preceded by Course 6 in mathematics. Sec. I is for students in civil engineering; Sec. II, for others.
6. Engineering. Theory of construction. *One hour.* Professor GREENE.
Course 6 must be preceded by Course 6 in mathematics.
7. Engineering Design. *Five hours.* Professor GREENE.
Course 7 accompanies Courses 5 and 6.

SECOND SEMESTER.

2. Tests of Materials. *One hour.* Professor GREENE. (Elective.)
3. Graphical Analysis of Structures. Two sections. *Two hours.* Professor GREENE.
Course 3 requires at least a limited knowledge of statics. Sec. II is for students in civil engineering; Sec. I, for others.
8. Engineering. Theory of construction. *Four hours.* Professor GREENE.
9. Hydraulics. Two sections. *One hour.* Professor GREENE.
10. Water Supply and Sewerage. *One hour.* Professor GREENE. (Elective.)

MECHANICAL ENGINEERING.

FIRST SEMESTER.

- 5a. Principles of Mechanism. *Three hours.* Professor DENISON.
- 5b. Principles of Mechanism. *Two hours.* Professor DENISON.
Course 5a is for students of mechanical and of electrical engineering; Course 5b is for students of civil engineering. Both courses must be preceded by Course 1 in mathematics, and by Courses 1 and 5 in drawing.
- 8a. Prime Movers. Water wheels and steam engines. *Two hours.* Professor COOLEY and Mr. ALLEN.
- 8b. Prime Movers. Water wheels. *One hour.* Professor COOLEY.
Course 8b is intended for those who have taken Course 9; 8a, for all others. Both courses must be preceded by Course 7a or 7b.
10. Theory of Machine Design. *Two hours.* Professor COOLEY.
Course 10 must be preceded or accompanied by Course 5 in civil engineering.
12. Thermodynamics. Hot-air and gas engines, air compressors, and refrigerating machines. *Two hours.* Mr. ALLEN.
Course 12 must be preceded by Course 7a and by Courses 1 and 2 in physics.
15. Heating and Ventilation. Gas engines. *Two hours.* Professor COOLEY. (Elective.)

EITHER FIRST OR SECOND SEMESTER.

- 6a. Design of Shop Machinery. One or two sections. *Two hours.* Superintendent C. G. TAYLOR.
Course 6a must be preceded or accompanied by Course 5a or 5b, and be preceded by Courses 1, 5, and 9 in drawing. It may also be elected as Course 6b by advanced students.
11. Design of General Machinery. *Three hours.* Professor COOLEY and Mr. FAIG.

- Course 11 should be preceded or accompanied by Course 10.
14. Design of Engines and Boilers. *Two hours.* Professor COOLEY.
Course 14 must be preceded or accompanied by Course 10.
16. Steam Engineering. Practical work in the laboratory. *Three hours.*
Professor COOLEY. Fee, \$5.
Course 16 must be accompanied or preceded by Course 8a or 9.
17. Tests of Machines. Laboratory work. *Two hours.* Professor COOLEY and Mr. ALLEN.
Course 17 must be preceded by Course 7a or 7b.

SECOND SEMESTER.

- 7a. Dynamics of Machinery. Two sections. *Two hours.* Mr. FAIG.
- 7b. Dynamics of Machinery. Two sections. *One hour.* Mr. FAIG.
Course 7b is the same as the first half of Course 7a, and is intended for students of civil engineering. Both courses must be preceded by Course 6 in mathematics, and by Course 1 in physics.
9. Steam Engines. Valve gears. *Three hours.* Mr. ALLEN.
Course 9 must be preceded or accompanied by Course 7a or 7b.
13. Machinery and Mill Work. *Two hours.* Professor COOLEY.
18. Compressed Air Machinery and Refrigeration. *Two hours.* Professor COOLEY. (Elective.)
Course 18 must be preceded by Course 12.

ELECTRICAL ENGINEERING.

FIRST SEMESTER.

1. Primary and Secondary Batteries: Carhart's Primary Batteries. Recitations and laboratory work. *Two hours.* Dr. GUTHE.
Course 1 must be preceded by Courses 1, 2, and 3 in physics, and by a course in general or in analytical chemistry. Fee, \$1.
2. Electrical Measurements: Carhart and Patterson's Electrical Measurements. Recitations and laboratory work. *Four hours.* Professor CARHART, Assistant Professor PATTERSON, and Dr. GUTHE.
Course 2 must be preceded by Courses 1, 2, and 3 in physics; a knowledge of calculus is also required. Fee, \$3.
5. Alternate Current Apparatus. *Two hours.* Professor CARHART.
Course 5 must be preceded by Course 4.
6. Distribution of Electricity and Photometry. Lectures and laboratory work. *Three hours.* Assistant Professor PATTERSON.
Course 6 must be preceded by Course 4. Fee, \$1.
7. Design of Electrical Machinery and Appliances. *Two hours.* Professor CARHART.
Course 7 must be preceded by Courses 4 and 5.

SECOND SEMESTER.

3. Electrical Measurements. Continuation of Course 2. Lectures and laboratory work. *Three hours.* Dr. GUTHE. Fee, \$2.
- 4a. Electro-Dynamic Machinery: Thompson's Dynamo-Electric Machinery. Lectures, recitations, and laboratory work. *Four hours.* Professor CARHART and Assistant Professor PATTERSON. Fee, \$2.
- 4b. Electro-Dynamic Machinery, as in Course 4a. *Three hours.* Professor CARHART and Assistant Professor PATTERSON.
Courses 4a and 4b must be preceded by Course 2. Fee, \$1.
8. The Magnetic Circuit: Du Bois. Lectures and recitations. *Two hours.* Assistant Professor PATTERSON. (Elective.)
Course 8 must be preceded by Course 2 in physics and by a course in calculus.

MARINE ENGINEERING.

FIRST SEMESTER.

1. Naval Architecture. Professor COOLEY. (Elective.)

SECOND SEMESTER.

2. Marine Engines. *Three hours.* Professor COOLEY. (Elective.)
3. Ship-Building. Professor COOLEY. (Elective.)

MINING ENGINEERING.

SECOND SEMESTER.

1. Exploitation of Mines. Methods of opening, laying-out, and working mines. *Five hours.* Professor PETTEE. (Elective.)
Course 1 requires a knowledge of mineralogy and general geology.

REQUIREMENTS FOR GRADUATION.**THE DEGREE OF BACHELOR OF SCIENCE.**

To earn the degree of Bachelor of Science in civil, mechanical, or electrical engineering, the student must secure *one hundred and twenty Hours of Credit** in a prescribed course of study, as given below, and must present a satisfactory thesis. The diploma given indicates the line of study pursued. A time limit is not fixed; but four years is usually needed for the completion of the 120 hours of work.

Bachelors of Arts, of Philosophy, of Science, and of Letters, of this University, and graduates of any other reputable college, are recom-

* For explanation of the term Hour of Credit, see page 133; and for further information in regard to the courses prescribed for graduation, see pages 133 to 142.

mended for the same degree with the regular students, after completion of the special requirements alone of the several courses. These requirements can be completed in two years. The culture imparted by classical or other liberal training will be found to have its uses for one engaged in engineering work, and previous discipline of the faculties in exact research will enable the professional student to master more easily the requirements of the course. All the time the student can devote to general studies before taking up specialties will be well spent.

A choice between the three courses in engineering need not be made before the end of the first year.

GENERAL REQUIREMENTS.

The *general requirements* are as follows:

In French and German: fifteen hours, to be selected by the student from all the courses open to him in these two languages.

In English: Course 1.

In Mathematics: Courses 1, 2, 3, 4, 6.

In Physics: Course 1.

In Chemistry: Course 1 or Course 3.

In Drawing: Courses 1, 5.

In Civil Engineering: Course 5.

SPECIAL REQUIREMENTS.

The *special requirements* in the several courses are as follows:

1. *In Civil Engineering.*

To obtain the recommendation of the Faculty for the degree of Bachelor of Science in Civil Engineering, the student must satisfactorily complete, in addition to the thesis and the *general requirements* named above, courses as follows:

In Mineralogy: Course 1.

In Astronomy: Course 4.

In Drawing: Courses 4, 6, 14.

In Surveying: Courses 1, 2, 3, 5, 6.

In Civil Engineering: Courses 3, 4, 6, 7, 8, 9.

In Mechanical Engineering: Courses 5*b*, 7*b*, 8*a*.

In Elective Studies, taken in the Department of Engineering, or in the Department of Literature, Science, and the Arts: an amount sufficient to secure in all *one hundred and twenty Hours of Credit*.

2. *In Mechanical Engineering.*

To obtain the recommendation of the Faculty for the degree of Bachelor of Science in Mechanical Engineering, the student must satisfactorily

complete, in addition to the thesis and the *general requirements* named above, courses as follows:

In Physics: Course 2.

In Drawing: Course 9.

In Surveying: Course 4.

In Shop Practice: Courses 1a, 2a, 3a, 4a.

In Civil Engineering: Courses 3, 9.

In Mechanical Engineering: Courses 5a, 6a, 7a, 8b, 9, 10, 11, 12, 13, 14, 16.

In Metallurgy: Course 1.

In Elective Studies, taken in the Department of Engineering, or in the Department of Literature, Science, and the Arts: an amount sufficient to secure in all *one hundred and twenty Hours of Credit*.

3. *In Electrical Engineering.*

To obtain the recommendation of the Faculty for the degree of Bachelor of Science in Electrical Engineering, the student must satisfactorily complete, in addition to the thesis and the *general requirements* named above, courses as follows:

In Physics: Courses 2, 3a.

In Drawing: Course 9.

In Shop Practice: Courses 1a, 2a, 3a, 4a.

In Mechanical Engineering: Courses 5a, 6a, 7a, 8a.

In Electrical Engineering: Courses 1, 2, 4a, 5, 6, 7.

In Elective Studies, taken in the Department of Engineering, or in the Department of Literature, Science, and the Arts: an amount sufficient to secure in all *one hundred and twenty Hours of Credit*.

THE DEGREE OF MASTER OF SCIENCE.

A candidate for the degree of Master of Science in this Department must have previously received the engineering degree of Bachelor of Science from this University, or, if graduated elsewhere, must satisfy the Faculty that he possesses equivalent attainments.

He must choose a *major* subject, which shall occupy one-half of his time, from the work given in this Department, and two *minor* subjects, each to occupy one-fourth of his time, to be selected from any work open to engineering students; all of the work, however, shall be subject to the approval of the Faculty. Study and residence for not less than one year will be required.

If a candidate for the degree of Master of Science desires to have his major subject count towards the degree of Civil Engineer, Mechanical Engineer, or Electrical Engineer, such major subject must be advanced work in the course in which he took his bachelor's degree.

**THE DEGREES OF CIVIL ENGINEER, MECHANICAL ENGINEER,
AND ELECTRICAL ENGINEER.**

The conditions on which the degree of Civil Engineer, as a second degree, is conferred is as follows:

The degree of Civil Engineer may be conferred upon Bachelors of Science of this University, who have taken the degree for a course in civil engineering, if they furnish satisfactory evidence that they have pursued further technical studies for at least one year, and, in addition, have been engaged in professional work, in positions of responsibility, for another year. The first of the above requirements may be satisfied by pursuing at the University, under the direction of the Faculty, a prescribed course of study for an amount of time, not necessarily consecutive, equivalent to a college year. If the candidate does not reside at the University, his course of study must be approved in advance by the professor of civil engineering, and he must prepare a satisfactory thesis on some engineering topic, to be presented, together with a detailed account of his professional work, one month, at least, before the date of the annual Commencement at which he expects to receive the degree.

The conditions on which the degrees of Mechanical Engineer, and Electrical Engineer, as second degrees, are conferred upon Bachelors of Science of this University who have taken the degree for a course in mechanical engineering, or in electrical engineering, are analogous in character and in amount to those given above for the degree of Civil Engineer.

FEES AND EXPENSES.*

Matriculation Fee.—For Michigan students, *ten dollars*; for all others, *twenty-five dollars*.

Annual Fee.—For Michigan students, *thirty-five dollars*; for all others, *forty-five dollars*.†

Diploma Fee.—For all alike, *ten dollars*.

Laboratory Courses.—The required laboratory courses cost approximately as follows: *Shop Work.*—In the mechanical and electrical engineering courses, *twenty dollars*. *Physical Laboratory.*—A charge of *one dollar* is made for a course requiring one exercise a week during one semester, and the same rate for the longer courses. *Mechanical Laboratory.*—The charge for the course in steam engineering is *five dollars*.

*The Matriculation Fee and the Annual Fee must be paid in advance. No portion of the fees can be refunded, except by order of the Board of Regents, to students who leave the University during the academic year.

†An annual fee of ten dollars is required of all graduates who are granted the privilege of pursuing studies for an advanced degree *in absentia*.

Chemical Laboratory.—Students who take laboratory courses in chemistry are required to pay for the materials and apparatus consumed by them. The average cost is about *ten dollars*.

The fee required for any course has to be paid before the work of the course is begun.

The total amount of fees paid to the University during the whole four years' course, for matriculation, incidental expenses, materials used, and diploma, is, for Michigan students, from \$175 to \$200; and for others, from \$230 to \$255, varying more or less according to the student's actual laboratory expenses.

For additional information in regard to expenses see page 36.

Department of Medicine and Surgery.

A special Announcement giving further information in regard to this Department is published annually. For copies of this Announcement or for other information relating to the Department, address the Dean of the Department of Medicine and Surgery, Ann Arbor, Michigan.

THE Department of Medicine and Surgery, for which provision was made in the legislative act by which the University was organized in 1837, was opened for students in 1850. The college year was lengthened from six to nine months in 1877. The course was lengthened to three years in 1880 and to four years in 1890.

The college year extends from the first day of October to the Thursday following the last Wednesday in June. The lectures continue till the middle of June. The examinations are then begun and concluded in time for the Commencement exercises.

REQUIREMENTS FOR ADMISSION.

Every candidate for admission to the Department of Medicine and Surgery must be at least seventeen years of age, and must present to the Faculty satisfactory evidence of a good moral character.

Women are admitted, as to all other departments of the University, on the same conditions as men.

A certain standard of preliminary education is required for admission, and an examination will, therefore, be held on the following subjects:

English.—An essay of not less than two pages (foolscap), correct in spelling, punctuation, capital letters, grammar, and paragraphing.

Mathematics.—*Arithmetic.*—Fundamental Rules, Fractions (common and decimal), Denominate Numbers, Percentage, Proportion, Involution and Evolution, and the Metric System of Weights and Measures.

Algebra.—Fundamental Rules, Fractions, Equations of the First Degree containing two or more unknown quantities.

Geometry.—Plane Geometry.

Physics.—An amount represented by Carhart and Chute's Elements of Physics.

Botany.—The elements of Vegetable Morphology and Physiology as given in Spalding's Introduction to Botany.

Zoology.—Packard's Zoology, briefer course.

History.—Myers's General History, or an equivalent; and Higginson's or Johnston's History of the United States.

Latin.—Four books of Caesar.

Exemptions from Examination.—Certificates of matriculation in the Department of Literature, Science, and the Arts of this University (page 38), and in literary colleges of good standing, or of graduation in the *classical* or *Latin* courses of approved high schools,* and of other high schools and academies of equal standing, will be accepted as evidence of proficiency in such subjects of the above list of requirements as are covered by the recommendation, and will exempt the student from examination in those subjects only. In addition to the certificate of matriculation or diploma, every applicant claiming exemption from examination in any one of the subjects required for admission, must present to the examining committee of the Faculty a recommendation filled in and signed by the principal of the high school or other school which he has attended.

No student will be permitted to enter on the medical course with more than two conditions in the subjects required for admission, and all entrance conditions must be removed before the beginning of the student's second college year.

The examinations for admission will be held Wednesday and Thursday, September 29 and 30, 1897. Applicants are required to present themselves at this time as they are expected to be in attendance on the first day of the term, when the regular course of instruction begins.

The certificates and recommendations are to be presented to the Faculty committee on entrance requirements on the first day set for the examination.

Before admission to examination every applicant is required to present to the Secretary of the Faculty the Treasurer's receipt for the payment of the matriculation fee and the annual fee. It will, therefore, be necessary for him to apply first to the Steward at his office in University

*The approved schools comprise all those accepted by the Faculty of the Department of Literature, Science, and the Arts. For a list of these see page 50.

Hall, register his name as a student in the Department of Medicine and Surgery, and pay his fee to the Treasurer. In case of rejection, the money paid preliminary to examination will be refunded.

ADMISSION TO ADVANCED STANDING.

In order to be admitted to advanced standing, a student must have completed not only the didactic courses, *but the laboratory courses also*, already taken by the class to which he seeks admission. As a rule, the only laboratory courses which students applying for advanced standing have completed, are those in chemistry. When, in the judgment of the professor in charge, such a course is equivalent to that given in this Department, he may give the student credit for the work done, and thus avoid repetition. This, however, does not enable the student to finish the course earlier; it merely gives a few weeks of time which he may profitably spend on some advanced or optional course.

No credit can be given for lecture courses taken in schools unprepared to give the proper laboratory teaching. This applies to the clinical branches as well as to the scientific. For instance, lectures on surgery, even when accompanied by clinical demonstrations, cannot be accepted in lieu of the course given in this Department in the third year, which provides for operations by the student on animals.

COURSE OF INSTRUCTION.

The Course of Instruction covers four college years of nine months each. The first two years are devoted to the more strictly scientific work which serves as a basis for the technical and clinical studies which follow. The forenoons are given to lectures and recitations, three each day; the afternoons to laboratory drill during the first two years, and to the study of methods of diagnosis and means of treatment during the third and fourth years. Four or five hours a day are required in the laboratory and the hospital.

SCHEDULE OF STUDIES.*

FIRST YEAR.

LECTURES AND RECITATIONS IN FIRST SEMESTER.

<i>Subjects.</i>	<i>Time Required.</i>
Osteology,	2 hours a week.
General Anatomy,	2 hours a week.
General Chemistry,	5 hours a week.
Qualitative Analysis,	2 hours a week.
Bacteriology,	4 hours a week.

* Optional advanced courses are offered in all the courses in the schedule.

LECTURES AND RECITATIONS IN SECOND SEMESTER.

<i>Subjects.</i>	<i>Time Required.</i>
General Anatomy,	2 hours a week.
Physics,	4 hours a week.
Organic Chemistry,	5 hours a week.
Histology,	4 hours a week.

LABORATORY WORK IN FIRST YEAR.*

<i>Subjects.</i>	<i>Time Required.</i>
Anatomy,	Every day for 12 weeks.
Chemistry,	Every day for 12 weeks.
Bacteriology,	Every day for 12 weeks.

SECOND YEAR.

LECTURES AND RECITATIONS IN FIRST SEMESTER.

<i>Subjects.</i>	<i>Time Required.</i>
Regional Anatomy,	2 hours a week.
Anatomy of Nervous System,	2 hours a week.
Physiology,	5 hours a week.
Hygiene,	3 hours a week.
Embryology,	4 hours a week.

LECTURES AND RECITATIONS IN SECOND SEMESTER.

<i>Subjects.</i>	<i>Time Required.</i>
Regional Anatomy,	2 hours a week.
Surgical Anatomy,	2 hours a week.
Physiology,	5 hours a week.
Physiological Chemistry,	3 hours a week.
Hygiene,	2 hours a week.

LABORATORY WORK IN SECOND YEAR.

<i>Subjects.</i>	<i>Time Required.</i>
Anatomy,	Every day for 12 weeks.
Physiological Chemistry,	Every day for 12 weeks.
Histology,	Every day for 6 weeks.
Electrotherapeutics,	Every day for 6 weeks.
Physiology,	Four days a week for 6 weeks.

THIRD YEAR.

LECTURES AND RECITATIONS IN THIRD YEAR.

<i>Subjects.</i>	<i>Time Required.</i>
Theory and Practice,	4 hours a week.
General Surgery,	2 hours a week.

* Four to five hours constitute a day's work in the laboratory.

Obstetrics,	2 hours a week.
Materia Medica and Therapeutics,	5 hours a week.
Pathological Histology,	2 hours a week.

LABORATORY AND DEMONSTRATION COURSES IN THIRD YEAR.

<i>Subjects.</i>	<i>Time Required.</i>
Practical Pathology,	Every day for 5 weeks.
Clinical Medicine,	Every day for 5 weeks.
Nervous Diseases,	Every day for 5 weeks.
Operative and Minor Surgery,	Every day for 5 weeks.
Obstetrics and Gynæcology,	Every day for 5 weeks.
Ophthalmology, Otology, and Laryngology,	Every day for 5 weeks.
Practical Pharmacology,	Four days a week for 5 weeks.

CLINICAL COURSES IN THIRD YEAR.

<i>Subjects.</i>	<i>Time Required.</i>
Internal Medicine,	2 hours a week.
Surgery,	2 hours a week.
Gynæcology,	2 hours a week.
Ophthalmology,	2 hours a week.
Nervous Diseases,	1 hour a week.
Diseases of Nervous System,	1 hour a week.

FOURTH YEAR.

LECTURES AND RECITATIONS IN FOURTH YEAR.

<i>Subjects.</i>	<i>Time Required.</i>
Theory and Practice,	2 hours a week.
Special Surgery,	3 hours a week.
Obstetrics and Gynæcology,	3 hours a week.
Diseases of the Nervous System,	2 hours a week.
Dermatology and Syphilology,	2 hours a week.
Ophthalmology, Otology, and Laryngology,	2 hours a week.
Medical Jurisprudence,	20 lectures.

CLINICAL COURSES IN FOURTH YEAR.

<i>Subjects.</i>	<i>Time Required.</i>
Internal Medicine,	4 hours a week.
Surgery,	2 afternoons a week.
Obstetrics and Gynæcology,	2 afternoons a week.
Dermatology and Syphilology,	2 hours a week.
Ophthalmology, Otology, and Laryngology,	2 afternoons a week.
Diseases of Nervous System,	1 hour a week.

BEDSIDE AND DISPENSARY INSTRUCTION.

Senior students are given charge of patients, and are required to make diagnoses, prescribe, dress wounds, and perform minor operations under the direction of the professor in charge. A lying-in-ward furnishes obstetrical cases, which are attended by the senior students in rotation.

SPECIAL LECTURES.

From time to time members of the Faculty give special lectures upon subjects included in their original researches. These lectures vary in number from three to six on each subject and are given at times when all students may attend them. Attendance is voluntary and no examinations are held.

The special lectures given in 1896-7 are on the following subjects:

1. Nuclein and Nuclein-Therapy.—Dr. VAUGHAN.
2. Heredity.—Dr. McMURRICH.
3. The Sympathetic Nervous System.—Dr. HUBER.

EXAMINATIONS.

Examinations (written, oral, or both written and oral) are held at the close of each course or semester. Students "*conditioned*" cannot apply for another examination in the same subject until the close of the next course or semester, except that a student conditioned at the close of the college year may ask for another examination in the first two weeks of the following year. Students reported "*not passed*" are required to take the course over again before applying for re-examination. Candidates for graduation, who fail in an examination, are allowed a re-examination before the entire Faculty. No student is recommended for graduation until he has completed all his required work and has passed all his examinations. Further rules concerning examinations are given in the special Announcement of the Department.

INSTRUCTION FOR WOMEN.

The course of instruction for women is in all respects equal to that for men. Practical Anatomy is pursued by the two sexes in separate rooms, but in the lectures, in public clinics, in the several laboratories, and in various class exercises, it is found that both sexes may attend with propriety at the same time.

COMBINED COURSE IN THE DEPARTMENT OF LITERATURE, SCIENCE, AND THE ARTS, AND IN THE DEPARTMENT OF MEDICINE AND SURGERY.

All the subjects of the first two years of the preceding schedule, with the exception of electrotherapeutics, are taught in the elective courses open to students in the Department of Literature, Science, and the Arts.

Students in that department who intend to study medicine after taking the bachelor's degree, may shorten their total period of residence at the University by from a year to a year and a half or two years, if they pursue, as literary students, courses that cover the subjects required in the first two years of the medical curriculum. The precise amount of time gained will depend upon the amount of required medical work the student completes.

For a fuller description of the combined course see pages 98 to 101.

REQUIREMENTS FOR GRADUATION.

To be admitted to the degree of Doctor of Medicine, a student must be twenty-one years of age and possess a good moral character. He must have completed the required courses in laboratory work, and have passed satisfactory examinations on all the required studies included in the full course of instruction. He must have been engaged in the study of medicine for the period of four years. If admitted to advanced standing, he must have attended four full courses of medical lectures, *the last two of which must be in this Department*, and have passed the required examinations.

Graduates of other reputable medical colleges, wishing to take a degree in this school must regularly matriculate and do all work required in this school and not required in the school that has granted the diploma already held. The shortest term of residence for such graduates shall be one year. Graduates of other reputable medical schools may, however, without becoming candidates for a degree, pursue any of the post graduate courses on the conditions stated below.

GRADUATE COURSES.

Graduates of this Department of the University, or of other medical schools, are admitted to any one or more of the regular courses of the curriculum on giving evidence of their ability to profit by the instruction given. Advanced courses, beyond the regular curriculum, are also arranged in several of the subjects taught. Graduate students are required to pay for each course, of six weeks duration, the sum of ten dollars in addition to the ordinary laboratory expenses of the course, which vary with the character of the work.

The nature of the work arranged for graduate students in some of the branches of instruction may be seen from the following descriptive outline:

Hygiene and Bacteriology.—(a) A course in advanced bacteriological study, such as a student who has already completed the required courses in bacteriology may elect. (b) A course arranged especially for health officers, and including the chemical and bacteriological examination of food, water, soil, and air.

Electrotherapeutics.—A course covering the subjects of diagnosis, electrolysis, the management of continuous-current and cautery batteries, and the use of induction coils and the static machine in their therapeutic applications.

Pathology.—A systematic course in pathological histology is open to graduates, as are also special courses in the pathological histology of organs, tumors, blood, etc. Those wishing to take the latter courses must have had the necessary preliminary training.

Physiology.—(a) A course in physiological demonstrations; especially those intended to illustrate class lectures. The course is designed for those who teach physiology, but have not had opportunity of learning the methods of preparing physiological experiments and vivisections. (b) For those who have sufficient training in laboratory methods, the apparatus and facilities of the laboratory are offered for the investigation of special problems.

Histology.—(a) A course in histological technique, including the methods of preparing, staining, and sectioning tissues. The course is designed for those desiring to fit themselves for histological research. (b) A course on the microscopic anatomy of the eye and ear and the central nervous system.

Chemistry.—Graduates may select work in any of the courses provided in the several departments of the University. The courses in analytical and organic chemistry are described on pages 88 to 91. Special studies for individual purposes may be undertaken. Opportunity for research is given. The chemical library is supplied with the extensive repositories of science required in research, and with a wide range of literature of applied chemistry. In any part of the laboratory graduates may select any work they are prepared to pursue.

Anatomy.—Graduates may pursue a special course in the anatomy of the nervous system, and facilities are offered for the investigation of special problems of anatomy, and for the thorough anatomical study of regions of special surgical importance.

FACILITIES FOR INSTRUCTION.

There are ample collections of plates, photographs, models, specimens, preparations, apparatus, and instruments, for illustrating the different studies embraced in the course. Additions are made from time

to time to these collections so that the members of the Faculty are able to adopt every new method of illustration, and to exhibit to the classes each year all important improvements in the way of instruments and apparatus that are employed in the practice of medicine and surgery, and to show their application.

The following paragraphs may serve to indicate the extent of some of these collections and the character of the work done in the several laboratories. For further information in regard to the University museums, laboratories, and libraries, see pages 21 to 31.

MUSEUM OF ANATOMY.

The museums of the late Professors FORD and SAGER, embracing several thousand specimens, the result of many years' labor in collecting and preparing materials intended to aid directly in teaching, are now the property of the university, and are used in the daily work of the class rooms. These museums contain a valuable collection of bones, illustrating healthy as well as diseased conditions, the various changes that occur from infancy to old age, and the processes of first and second dentition; dissections, general and partial, of the vascular, nervous, and muscular systems, both normal and abnormal; models of various portions of the body in wax, papier-maché, and plaster, illustrating morbid growths, skin diseases, etc.; preparations in the comparative embryology, neurology, and craniology of the vertebrata; in human embryology, in the anatomy and pathology of the diseases of women, etc. The collection of monstrosities, both single and double, of man and of the lower animals, is one of the largest in the United States.

ANATOMICAL LABORATORY.

The anatomical laboratory is admirably adapted for its purpose; the rooms are large, well lighted, and well ventilated.

The Anatomical Law of Michigan furnishes, without embarrassment, an ample supply of material for the purpose of practical anatomy. All students who have completed the requirements in descriptive and practical anatomy, pursue a course in operative surgery upon the cadaver.

MUSEUM OF MATERIA MEDICA.

The museum of materia medica consists of a fairly complete collection of the crude substances used in medicine along with their principal preparations and active principles. The drugs are arranged in groups convenient for study, importance being laid not on their origin but on their action. The museum is also provided with several works of reference for the use of the students and with a number of graphic registrations of the action of drugs. It is open to students of the junior class at such hours as they arrange with the instructor.

CHEMICAL LABORATORY.

(See also page 28.)

The chemical laboratory provides thorough instruction and suitable appliances for the practical study of all branches of medical chemistry. In each of the two laboratory courses *required for graduation*, namely, qualitative chemistry (devoted to the study of chemical changes and incompatibilities), and analysis of urine (applied to clinical uses and physiological study), students are taken in sections of limited number for daily drill in the class room to direct the daily practice in the laboratory. Before beginning laboratory work the student takes a preparatory course, with daily recitations, in chemical notation, and at the close of the work in each course is held to an examination.

ELECTROTHERAPEUTICAL LABORATORY.

The laboratory of electrotherapeutics is supplied with apparatus for illustrating all the various methods of generating electric currents, and for measuring currents, voltages, and resistances.

The students are furnished materials from which they construct batteries, induction coils, cautery knives, electrodes, and other appliances, and, with these, experiments in electrophysics, electrophysiology, and electrotherapeutics are conducted.

It is the aim in this laboratory instruction to make the student practically familiar with the faults and the essential requirements of all forms of electrical apparatus made use of for therapeutical purposes.

PHYSIOLOGICAL LABORATORY.

The apartments provided for the physiological laboratory offer excellent facilities for practical work, whether of class instruction or of original investigation. A large and well-lighted room is appropriated chiefly to the use of undergraduate students, who perform under the direction of instructors most of the fundamental physiological experiments. The subjects commonly embraced in the practical course relate to the physiology of the nerves and muscles, reflex action, circulation, respiration, and digestion. A smaller room is devoted to advanced work and original investigation. The laboratory has a good supply of apparatus, tools, etc., and is open daily for physiological experiment and research.

HISTOLOGICAL AND EMBRYOLOGICAL LABORATORY.

This laboratory is well supplied with microscopes, microscopical accessories, microtomes, imbedding apparatus, and other instruments used in histological and embryological work. During his term of instruction in the laboratory each student is furnished with microscopical reagents, a microscope, and a table for his own use, so that the practical

work is carried out by each individual for himself. In the elementary course in histology an effort is made to teach the student the use of the microscope, the methods of teasing, the methods of mounting paraffine and celloidine sections, and the use of a number of the more commonly employed stains.

During his stay in the laboratory the student makes about one hundred and fifty preparations, and he is required to sketch them all as he makes them. These preparations are so arranged as to furnish him with specimens of typical cells and cell division, of all the elementary tissues, of the various glands and organs of the body, of the epidermis, of the central and peripheral nervous system, and of the sensory end-organs and the special senses.

In the course on microscopical technique, which is open only to those who have completed the elementary work, the student is instructed in the various methods of hardening, staining, imbedding, section-cutting, and injecting, the special methods of staining and counting red and white blood cells, and the use of the microscope in forensic medicine.

An optional laboratory course in the embryology of the salamander, the chick, and mammalia is offered, which is open to students who have completed the elementary work in histology and a course in microscopical technique, and have attended lectures in embryology. There is also an optional laboratory course in the microscopic anatomy of the brain and the special senses.

PHARMACOLOGICAL LABORATORY.

The pharmacological laboratory is situated in the medical building and consists of two chief rooms, one of which is used for chemical, the other for experimental, pharmacology. Each laboratory is supplied with apparatus and materials for original work in either branch of research, and any student or graduate receives every encouragement in the prosecution of such work. Among the apparatus recently introduced into this laboratory may be mentioned Runne's kymographion with endless paper, two sets of revolving drums, artificial respiration apparatus driven by an electric motor, time markers and signals (electric and clock-work), batteries and secondary coils, centrifugal and "shaker" apparatus, balances, combustion furnaces, etc.

PATHOLOGICAL LABORATORY.

This laboratory is supplied with microscopes, microtomes, paraffin ovens, and the other apparatus necessary in the study of pathologic histology. Each student is furnished with a locker containing a microscope with high and low powers, and is assigned to a table containing the necessary stains and reagents for practical work. These are furnished by the laboratory.

The supply of material for the study of pathologic histology is the result of collections made in the pathological institutes of Vienna and Freiburg, and embraces almost every known pathologic condition. This collection gives ample material for the regular courses, and, in addition, offers special opportunities to the advanced student who may wish to pursue studies in certain lines of special pathology, as the pathology of the nervous system, genito-urinary tract, skin, etc. It is especially to the post-graduate student that this collection presents a fine opportunity for special work, as he is thereby offered practically the same advantages as those given in the principal laboratories abroad.

In addition an abundant supply of fresh material comes from the clinics of the University Hospitals, and this is utilized to the fullest extent in the teaching both of gross and of microscopical pathology. The laboratory is fitted with a Bausch and Lomb carbonic acid freezing microtome for use in the making of quick diagnoses and in the preparation of fresh material for class study. By the use of this instrument stained sections may be had in three minutes after the removal of the tissues from the body, and the student is thus enabled to make a study of morbid changes impossible in hardened material.

The required course in pathologic histology lasts eight weeks, five afternoons a week being required, though Saturday afternoon is also usually taken for this work. The student studies the histology of morbid processes in fresh and hardened material, in stained and unstained sections, and applies chemical tests, etc. He is further required to demonstrate his knowledge by drawings and written descriptions of the specimens. The course includes the study of the most important alterations in the blood and circulatory system, changes in nutrition, tumors, the infectious diseases, and the more important diseases of special organs. About one hundred and seventy-five specimens, stained and ready for mounting, are given to the class as unknowns for identification and demonstration. These become the property of the student. The study of inflammation is also made in the living animal.

Written reports upon each of these specimens are required, and, in addition, fifty drawings. Small prizes are offered yearly for the best two sets of drawings; for this year fifteen dollars and five dollars.

A practical working knowledge of pathologic technique is also required of each student, who is instructed in the methods of examination of fresh tissues, and in the various processes of hardening, embedding, cutting, etc.; and in the use of the most important stains.

A special course in technique and in the diagnosis of malignancy is offered to junior students who have finished the regular course. Reagents and apparatus are furnished by the laboratory, and separate rooms are set apart for the use of the advanced student. The abundance of valu-

able material available for this course offers unusual opportunities to the physician who may wish to take special work. To such and to those who wish to work up material of their own every facility will be offered. The members of this advanced class form a Journal Club which meets weekly. At these meetings reports are made in detail of material given to the student for examination, papers are read, specimens exhibited, and general discussions held.

An advanced laboratory class for senior students is held on Saturday mornings. This course is limited to the special study of the blood, genito-urinary tract, eye, etc. An opportunity is given each student for work in any special line he may choose for original investigation.

The laboratory contains a set of pathological models and a nucleus of a pathological museum which already contains many rare and valuable specimens. These are utilized for teaching purposes as far as possible.

Autopsies.—A senior course in post-mortem work is given one hour weekly throughout the year. The most important methods of making sections are demonstrated upon the cadaver, and are repeated until the student is thoroughly familiar with them. Especial attention is paid to the gross appearance of both normal and pathologic conditions of the body.

The clinical autopsies are held before the members of the senior and junior classes, and the findings thoroughly demonstrated. No regular time can be set for this work, but in the event of a post-mortem the students are excused from other work in hand, so that they may be present at the section. The number of these autopsies has greatly increased within the last two years, and the cases shown have been most instructive ones.

HYGIENIC LABORATORY.

The hygienic laboratory has a large room devoted to bacteriological work, containing all of the improved apparatus employed by Koch. The course in bacteriology extends through three months and requires four hours daily in the laboratory for this time. All the known pathogenic and the most important non-pathogenic germs are studied. The microscopes used are those of Zeiss and Leitz. All animals needed for experimentation are supplied by the laboratory. There are also courses in the chemical and bacteriological examination of drinking water, and in the study of food adulterations. Besides these, advanced students who wish to do practical work in the study of ptomaines and leucomaines are accommodated.

The objects had in view in the establishment of this laboratory were as follows: (1) original research as to the causation of disease; (2) sanitary examination of food and drink; (3) instruction to students.

Besides the large bacteriological room, there are rooms fitted especially for gas analysis and water analysis, and private rooms for original research. There are also a cold chamber, a disinfecting chamber, and an animal room.

MUSEUM OF NATURAL HISTORY AND LIBRARY.

Students in medicine have access to the botanical, zoological, and geological cabinets of the University, estimated to contain 255,000 specimens. The Medical Library contains 7,510 volumes. The General Library, containing 84,693 volumes, is also open to all students. A complete catalogue, arranged both by authors and by subjects, is accessible to readers. The leading medical periodicals of this country and of Europe are taken and kept on file.

THE UNIVERSITY HOSPITAL.

The University Hospital has sufficient capacity to accommodate a large number of patients, is thoroughly equipped, and is in the immediate charge of a competent house physician and surgeon and an experienced matron. It is under the direction of the Faculty, who attend regularly upon the patients (each upon such cases as come within his special department) and give clinical instruction in the wards to senior students. In connection with the hospital there is a spacious clinical amphitheatre where clinics are regularly held every day during the college year, for medical, surgical, gynaecological, ophthalmological, neurological, dermatological, and venereal cases, at which time examinations are made, prescriptions given, and surgical operations performed in the presence of the class.

It is the aim of the Faculty to make instruction in clinical medicine systematic and thorough, and this they are enabled to do by an abundance of interesting cases which present themselves. The number of patients treated and operated upon in the hospital each year is more than 1,500. Each student, therefore, may see, during his two clinical years, more than 3,000 patients, many of whom present more than one abnormality. Patients are utilized for teaching purposes more thoroughly than can be done in many hospitals. The University Hospital exists for the purpose of affording clinical material and every patient is utilized, but this does not detract in any manner from the benefit which the patient may receive. Students are required to take the history and keep a record of patients, and, under proper supervision, are offered an opportunity of personally examining the patients. Senior students are required to dress wounds and give other detailed attention to patients assigned them. Stress is laid upon the value of ward and bedside instruction. A small

room in the hospital is furnished with laboratory appliances and here the student is required to make practical application of the knowledge which he has previously acquired in the scientific laboratories.

A lying-in ward is established in which senior students are given an opportunity to attend cases of labor, and become familiar with the duties of the lying-in room, under the immediate direction of the professor of obstetrics and his assistant.

For the treatment of diseases of the nervous system the hospital is furnished with apparatus for generating all kinds of electric currents. Attendants especially skilled in the application of electricity and massage are put in charge of such cases.

A large portion of the cases admitted to the hospital are from a distance and are of more than common interest, including many cases of chronic diseases of the lungs, the heart, and the nervous system.

Under the present organization, patients are much better accommodated, and clinical instruction is rendered more systematic and efficient than was formally possible. The expenses to patients are only for their board, for unusual appliances or special nursing, and for medicines, the services of the Faculty being rendered gratuitously to those made available for clinical instruction.

Patients who desire to enter the hospital are requested to write to Mr. Harry W. Clark, Superintendent of the University Hospital, Ann Arbor, Mich., to ascertain if there is room for their accommodation, and to obtain a circular giving more fully the rules governing admission. No contagious diseases are admitted.

Training School for Nurses.—In connection with the Hospital there has been established a training school for nurses under the charge of a competent and experienced matron. The term of study and service extends through two years, at the expiration of which time those who have proved themselves worthy are granted a certificate of graduation. For further information in regard to this school, application may be made to the Superintendent of the Hospital.

TEXT-BOOKS AND BOOKS OF REFERENCE.

A list of text-books and books of reference recommended is given in the special Announcement of the Department. The student who begins a course of reading without an instructor, is recommended to devote the most of his time for the first year to the elementary branches, anatomy, physiology, and general and medical chemistry.

FEES AND EXPENSES.*

Matriculation Fee.—For Michigan students, *ten dollars*; for all others, *twenty-five dollars*.

Annual Fee.—For Michigan students, *thirty-five dollars*; for all others, *forty-five dollars*.

Diploma Fee.—For all alike, *ten dollars*.

Laboratory and Demonstration Courses.—The required laboratory and demonstration courses cost approximately as follows:

Anatomy	\$20 00
Chemistry	15 00
Bacteriology	15 00
Physiological Chemistry	15 00
Histology	7 00
Electrotherapeutics	8 00
Pathology	10 00
Operative Surgery	10 00
Demonstration Course in Medicine	10 00
“ “ “ Obstetrics	10 00
“ “ “ Nervous Diseases	10 00
“ “ “ Laryngology and Ophthalmology ...	10 00

A deposit of the amount indicated for each of the above is required before the work of the course is begun.

Graduate Courses.—A fee of *ten dollars* is charged to graduate students for each course taken, in addition to the ordinary laboratory expenses of the course.

The total amount of fees paid to the University during the whole four years' course, for matriculation, incidental expenses, materials used, and diploma, is, for Michigan students, about \$290.00: and for others, about \$345.00, varying a little with the student's actual laboratory expenses.

For additional information in regard to expenses see page 36.

* The Matriculation Fee and the Annual Fee must be paid in advance, and no student can select his seat until after such payment. No portion of the fees can be refunded, except by order of the Board of Regents, to students who leave the University during the academic year.

Department of Law.

A special Announcement giving further information in regard to this Department is published annually. For copies of this Announcement, or for other information relating to the Department, address the Dean of the Department of Law, Ann Arbor, Michigan.

THE Department of Law was opened in 1859. Its growth and influence have been marked. From the first it has been the constant endeavor of the Faculty to furnish facilities for legal training equal to any attainable elsewhere in the country. And no effort will be spared to make the Department in the future deserving of continued and increasing prosperity. The Faculty is composed of both resident and non-resident members. The resident members, ten in number, devote themselves regularly and continuously to the work of instruction. The non-resident members, three in number, are engaged in practice, but meet their classes each week on designated days. In addition to the instruction by the regular staff, which covers all the fundamental and ordinary branches of the law, provision is made for several courses by specialists upon such subjects as International Law, Comparative Constitutional Law, Constitutional History, the Interstate Commerce Act, Admiralty Law, Medical Jurisprudence, Injunctions and Receivers, Mining Law, Patent Law, and Copyright Law. There are twelve special lecturers, and each of the special courses consists of from six to fifteen lectures.

The department is housed in a spacious building that is devoted exclusively to its use. A large addition has recently been made to the structure, which is now ample

in its accommodations and admirably adapted for law-school work.

The college year extends from the first day of October to the Thursday following the last Wednesday in June.

DIRECTIONS TO APPLICANTS FOR ADMISSION.

Before applying for admission to the Department, or to the entrance examination, the applicant is required to present to the Dean of the Department, at his office in the Department Building, the Treasurer's receipt for payment of the matriculation fee and the annual fee. It is essential, therefore, that an applicant for admission should apply first to the Steward of the University at his office in University Hall, register his name as a student in the Department of Law, and pay his fees to the Treasurer. He is then entitled to apply for admission, and in case of rejection, the money paid preliminary to the examination will be refunded by the Treasurer.

REQUIREMENTS FOR ADMISSION.

[For admission to advanced standing, see page 166.]

[For admission of special students, see page 166.]

[For admission to the graduate class, see page 166.]

The requirements for admission to the Department of Law have recently been raised, but the additional requirements do not go into effect until the opening of the University year in 1900. The requirements in force for the examinations to be held in 1897 are given below.

REQUIREMENTS FOR ADMISSION IN 1897.

Applicants for admission to the first year class must be at least eighteen years of age, to the second year class, nineteen, and to the third year class, twenty. Applicants for admission to the graduate class must be at least twenty years of age. Special students must be at least nineteen years of age.

Graduates of universities or colleges, matriculates of universities or colleges, and students who have completed an academical or high school course approved by the Faculty, are admitted to the Department without examination as to preliminary requirements, and may become candidates for a degree. In order to be entitled to this privilege, however, the

applicant should present to the Dean of the Department evidence that he comes within some one of the classes named, which should be in the form of a diploma or certificate, or a certified copy thereof. All other applicants, if candidates for a degree, must pass satisfactory examinations in the following subjects:

English Language, Composition, and Rhetoric.—The applicant will be required to write an essay of not less than two pages (foolscap), correct in spelling, punctuation, capital letters, grammar, and paragraphing. The topics for the essays, which will be such as the applicant is likely to be familiar with and from which he may make a selection, will be given at the time of the examination.

English Literature.—Stopford A. Brooke's Primer, or any other manual, may be used for an outline of the subject.

Mathematics.—*Algebra.*—To Quadratic Equations.

Plane Geometry.—As given in Olney's New Elementary Geometry, Beman and Smith's Plane and Solid Geometry, or an equivalent in other authors.

History.—Myers's General History, or an equivalent, Johnston's, or McLaughlin's, History of the United States, or an equivalent, and Ransome's History of England, or an equivalent.

Civil Government.—Fiske's Civil Government, Hinsdale's American Government (Parts I and II, especially the large print), or an equivalent.

It should be said that, while a competent degree of knowledge will be required, the examination will not be technical; and, further, that applicants may be admitted to the Department conditionally, notwithstanding that they may be deficient in some subjects, in case such deficiencies are not so considerable as, in the judgment of the Faculty, to disqualify them for the performance of the work of the class to which they seek admission. All such deficiencies, however, must be made up before the end of the year, unless an extension of time is granted by the Faculty.

REQUIREMENTS FOR ADMISSION IN 1900.

The conditions respecting age of applicants will remain as stated above for the year 1897. The same classes of students as in 1897 will also then be exempt from examination.

In September, 1900, and thereafter until further notice, all applicants, *if candidates for a degree*, except those who are exempt as above explained, will be examined in some one of the four groups of requirements for admission to the Department of Literature, Science, and the Arts, the applicant having the privilege of selecting the group upon which he will be examined. These groups are described on pages 39 to 45.

ADMISSION TO ADVANCED STANDING.

Applicants for admission to the second year class must be at least nineteen years of age, and to the third year class, twenty.

In September, 1897, the following classes of persons will be admitted to advanced standing without examination:

1. To the second year class:—*a.* Attorneys-at-law in good and regular standing. *b.* Persons who have satisfactorily completed one year's work in another law school of approved standing, and who bring proper certificates thereof.

2. To the third year class:—*a.* Persons who have received, in due course, the degree of Bachelor of Laws from an approved law school, maintaining an undergraduate course of not less than two years of nine months each. *b.* Persons who have satisfactorily completed two years' work in any approved law school maintaining an undergraduate course of three years of nine months each, and who bring the proper certificates thereof.

All other applicants for advanced standing in the undergraduate course will be received only upon examination. Before he can enter the examination, the applicant must, unless exempt, pass the required preliminary examination for admission to the Department. He must, also, if he seeks admission to the second year class, show that he has studied law at least fifteen months, and if to the third year class, at least two years and a half, under some reputable practitioner or instructor. The evidence that he has complied with these requirements should be in the form of a certificate or letter from the practitioner or instructor with whom he has studied, and should be presented to the Dean of the Department. The applicant must then pass examinations upon the subjects in the course that have been taken by the class which he seeks to enter, or their equivalent. Under this regulation, he will be allowed to select the subjects for examination, but they must be the equivalent of those that have been taken by the class. He will receive credit for the subjects passed, and the examination will be final as to such subjects.

ADMISSION TO THE GRADUATE CLASS.

Applicants for admission to the graduate class must be at least twenty years of age.

Until further notice, the graduate course will be open to those who have received the degree of Bachelor of Laws from an approved law school, maintaining an undergraduate course of not less than three years of nine months each.

ADMISSION OF SPECIAL STUDENTS.

Persons who have been reading law for a considerable period before making application for admission to the Department, but whose reading,

or preliminary preparation, has not been sufficiently extensive to bring them within the rules for admission to any class, are allowed to become special students, with the privilege of pursuing a selected course of study, but without the privilege of being enrolled as candidates for a degree. They are permitted, under the guidance of the Faculty, to select subjects from the different courses. They must, however, satisfy the professors giving instruction in the subjects selected, that they are qualified to pursue the work with profit to themselves.

A like privilege is extended to persons who have not read law before applying for admission, and whose preliminary preparation is not such as to entitle them to enter as candidates for a degree.

TIMES OF EXAMINATIONS FOR ADMISSION.

Examinations for admission will be held in the Department Building, September 28, 29, and 30, 1897, beginning at nine o'clock in the morning and at two o'clock in the afternoon of each day. The examination on the first of these days will have reference to general education. The examination on the other days will have reference to legal education, and will be confined to applicants for advanced standing. Applicants for advanced standing, unless exempt from the preliminary requirements, should be present at both of these examinations.

COURSE OF INSTRUCTION.

The course of instruction for undergraduates is a graded course, extending through three academic years of nine months each. The subjects upon which instruction is given, the time devoted to each subject, and the methods used, are described below.

FIRST YEAR.

Elementary Law. Two hours a week for the first semester. Text-book work accompanied by oral exposition. Class divided into two sections. Professor WILGUS.

Elementary Real Property. Two hours a week for the second semester. Text-book work accompanied by oral exposition. Class divided into two sections. Professor HUTCHINS.

Contracts and Quasi-Contracts. Three hours a week for the first semester and two for the second. Text-book and cases. Class divided into two sections. Professor KNOWLTON.

Criminal Law and Procedure. Two hours a week for the year. *First Semester.* Lectures on Criminal Law. Professor KNOWLTON. *Second Semester.* Text-book on Criminal Pleading and Procedure. Class divided into two sections. Assistant Professor JOHNSON.

Torts. Two hours a week for the year. *First Semester.* Text-book and cases. Class divided into two sections. Professor WILGUS. *Second Semester.* Lectures. Professor THOMPSON.

Domestic Relations. Two hours a week for the first semester. Lectures. Professor ANGELL.

Husband and Wife. Two hours a week for the second semester. Lectures. Professor KIRCHNER.

Personal Property. One hour a week for the year. Lectures. Professor GRIFFIN.

Common Law Pleading. Two hours a week for the second semester. Text-book. Class divided into two sections. Assistant Professor JOHNSON.

Evidence. One hour a week for the second semester. Text-book. Class divided into two sections. Professor WILGUS.

SECOND YEAR.

Agency. Two hours a week for the first semester. Lectures and cases. Professor MECHEM.

Partnership. Two hours a week for the second semester. Lectures and cases. Professor MECHEM.

Bills of Exchange and Promissory Notes. Two hours a week for the first semester. Text-book and cases. Class divided into two sections. Assistant Professor JOHNSON.

Bailments and Carriers. Two hours a week for the second semester. Lectures. Professor KNOWLTON.

Civil Pleading and Procedure at Common Law. Two hours a week for the first semester. Lectures. Professor GRIFFIN.

Code Pleading. Two hours a week for the first semester. Text-book. Class divided into two sections. Assistant Professor JOHNSON.

Real Property, Including Fixtures, Easements, and Landlord and Tenant. Two hours a week for the year. Lectures. Professor THOMPSON.

Equity Jurisprudence. Two hours a week for the first semester. Text-book, lectures, and cases. Professor HUTCHINS.

Equity Pleading and Procedure. Two hours a week for the second semester. Lectures. Professor THOMPSON.

Corporations. Two hours a week for the second semester. Text-book and cases. Class divided into two sections. Professor WILGUS.

Evidence. Two hours a week for the second semester. Lectures. Professor GRIFFIN.

THIRD YEAR.

Constitutional Law. Two hours a week for the first semester. Lectures. Professor ANGELL.

Corporations. Two hours a week for the second semester. Lectures. Professor KNOWLTON.

Jurisprudence of the United States. One hour a week for the year. Lectures. Professor GRIFFIN.

Damages. Two hours a week for the first semester. Lectures and cases. Professor MECHEM.

Extraordinary Legal Remedies. Two hours a week for the second semester. Text-book. Class divided into two sections. Assistant Professor JOHNSON.

Equity Jurisprudence. Two hours a week for the year. Lectures and cases. Professor HUTCHINS.

Wills and Administration. Two hours a week for the first semester. Lectures and cases. Professor MECHEM.

Private International Law. Two hours a week for the second semester. Lectures. Professor KIRCHNER.

Assignments for the Benefit of Creditors and Fraudulent Conveyances. One hour a week for the second semester. Lectures. Professor THOMPSON.

Suretyship and Mortgage. Two hours a week for the first semester. Lectures. Professor THOMPSON.

The Science of Jurisprudence. Two hours a week for the second semester. Lectures or text-book. Professor MECHEM.

RECITATIONS AND EXAMINATIONS.

For all text-book work, each class is divided into at least two sections. Whenever a subject is taught by lecture, the professor giving the instruction holds frequent, and usually daily, examinations upon ground covered by previous lectures. Additional quiz work upon the lectures is also given by the instructors. For this purpose the classes are divided into several sections, and the students are required to recite upon the lectures after the manner adopted in text-book instruction. Each section meets an instructor weekly for at least two exercises of one hour each. The size of the sections is such that each student can be examined at every exercise.

At the end of each semester one week is set apart for the thorough examination of all students upon the work of the semester. The examinations are in writing, and are final as to the work of the semester.

THE PRACTICE COURT.

It has been an objection frequently urged against the completeness of the training given in law schools that the student acquires no knowledge of actual practice. This objection has been largely removed by the introduction of the Practice Court recently established in this Department. The Practice Court is a part of the Department and is presided over by the professor of practice, while other members of the Faculty cooperate in conducting it. Its work is divided into three parts, that of

the law term, that of the jury term, and that of appellate jurisdiction. The court is provided with a full corps of officers including the member of the Faculty who may sit from time to time as presiding judge, the full bench of judges sitting as a Supreme Court, a clerk, sheriff, and the necessary deputies. Ample and commodious rooms have been provided for the use of the court, including a large court room fitted up with all of the furniture and fittings necessary for the trial of jury cases, jury rooms, and a clerk's office. The latter is provided with all the books and records used in actual practice and a full supply of the blanks in common use in the several states.

The purpose of the court is to afford to the student practical instruction in pleading and practice both at law and in equity, under the common law system and the "code" or "reformed" procedure, and actual experience in the commencement and trial of cases through all their stages. In commencing the actions, the students assigned to the case are permitted to select the state in which the action shall be supposed to be brought, thus enabling the student to acquire the practice as prevailing in his own state. All questions of practice, pleading, and procedure are governed by the law of the state in which the action is so laid, but questions of substantive law are determined according to the weight of authority.

Two classes of cases are presented:

First. Cases arising upon given statements of fact, prepared and assigned by the Faculty, upon which process is to be issued, pleadings framed, and the cause conducted to an issue, when it is argued and disposed of as a question of law upon the facts admitted. This class of cases affords the student practical experience in the commencement of suits, and the preparation of pleadings and the argument of the questions of law arising upon the facts. The practice and pleadings are under the common law or the code procedure as the students may elect. There are two public hearings in this course: *a.* The questions arising upon the pleadings, are argued and disposed of at a regular session of the court presided over by the professor of practice. *b.* After the pleadings have been approved, the case is set down for a separate hearing upon the questions of law. This argument is heard either by the professor of practice or that member of the Faculty who has charge of the instruction upon the subject involved. When the issues so arising have been satisfactorily disposed of, the student is given credit for the first course.

Second. Actual controversies are arranged and assigned for trial as issues of fact. The course includes the entire conduct of an actual case from its beginning to a final judgment in the Supreme Court. This involves the issue of proper process, the preparation and filing of appro-

priate pleadings, the subpoenaing of the witnesses, the impanelling of a jury, the examination and cross-examination of witnesses, the arguments to the court and jury, and all the other incidents of a contested trial.

For the purpose of this work the class is divided into sections, and the work of attorneys, witnesses, jurors and the like is performed by the students. A member of the Faculty presides at these trials, which are conducted with all the dignity and decorum of actual practice. Upon the satisfactory completion of the course, credit is given for it.

Every member of the senior class who is a candidate for a degree will be expected to take part in both courses, and to perform all the incidental duties which may be required of him. Satisfactory completion of both courses will be a condition precedent to a degree.

The Practice Court supersedes the Moot Courts formerly conducted in the Department.

ELOCUTION AND ORATORY.

It is important that those who study law with the view of becoming advocates should give attention to the subject of public speaking. It is a mistake to suppose that excellence in speaking is simply a gift of nature, and not the result of patient and persistent labor and study.

The following courses, given by Professor TRUEBLOOD, are optional: but, when a student has elected a course, he is required to complete it. Failure to do so will affect his standing at graduation.

FIRST YEAR CLASS

First Semester.

1. *Elocution.* Exercises in vocal culture, breathing, position, and gesture; pronunciation and emphasis; elements of quality and force of voice, with their application to choice passages from the orators. Two sections. Two hours a week.

Second Semester.

2. *Elocution.* Exercises in vocal culture, continued; principles of action; elements of pitch and time, and their application to representative selections. Two sections. Two hours a week.

SECOND YEAR CLASS.

First Semester.

3. *Study of Forensic Orators and Oratory.* Lectures on methods of public address and sources of power of the orator; study of representative orations. Two hours a week.

Second Semester.

4. *Oral Discussions.* Designed to develop readiness of extemporization. Practical application of the principles of formal logic. Leading

questions of the day debated in class. Lectures on argumentation and persuasion. Preparation of briefs. Two hours a week.

Information regarding the University Oratorical Association, the Northern Oratorical League, the Central Debating League, the Peck Testimonials, and the annual contests in oratory and debate, which afford opportunity for a practical application of the principles taught, may be found on pages 33 and 34.

THE GRADUATE COURSE.

The following course of study is pursued by candidates for the degree of Master of Laws:

Public International Law. Theses are required on topics assigned. President ANGELL.

History of Treaties. President ANGELL.

History of Real Property Law. Seminary work, based on Digby's History of the Law of Real Property. Professor THOMPSON.

The Law of Railways. Professor KNOWLTON.

Elections and the Appointment and Removal of Public Officers. Professor MECHEM.

The Railroad Problem. Professor ADAMS.

Comparative Constitutional Law. Lectures on the institutions of Germany, France, and other continental states, with a study of works on the English Constitution. Professor HUDSON.

Advanced Course in Constitutional Law and Constitutional History. Professor McLAUGHLIN.

The Inter-State Commerce Act. Professor T. M. COOLEY.

Admiralty Law. Judge SWAN.

The Law of Insurance. Dr. BIGELOW.

Medical Jurisprudence.—Assistant Professor JOHNSON.

Injunctions and Receivers. Dr. HIGH.

Toxicology in its Legal Relations. Dr. VAUGHAN.

Mining Law. Mr. CLAYBERG.

Patent Law. Mr. WALKER.

Copyright Law. Mr. REED.

Roman Law. Mr. MEADER.

Taxation. Professor MECHEM.

Judicial Sales. Professor KNOWLTON.

Students recite and are examined on the subjects enumerated above, and, in addition, are required to prepare a thesis on some subject approved by the Faculty, which thesis must be submitted at least two months prior to Commencement. Graduate students are allowed to attend undergraduate exercises.

REQUIREMENTS FOR GRADUATION.

THESES.

Each candidate for a degree is required to prepare and deposit with the Faculty a dissertation, not less than forty folios in length, upon some legal topic selected by himself and approved by some member of the Faculty. The dissertation must be satisfactory in matter, form, and style; and the student presenting it must hold himself in readiness to be examined upon the subject. It must be printed, on a typewriter or otherwise, and a copy left with the Department. Special rates can be obtained for doing this work, and two or three dollars will cover the expense of printing and binding. In special cases the Faculty will not insist on the printing, if it should appear to be a burden to a needy student.

The theses of candidates for the degree of Bachelor of Laws must be presented before the beginning of the second semester of the last year of the course. The theses of graduate students must be submitted at least two months prior to Commencement.

THE DEGREE OF BACHELOR OF LAWS.

Students who have received the full course of instruction, performed all required exercises, and passed the regular examinations, are admitted to the degree of Bachelor of Laws. Students admitted to advanced standing are entitled to all the privileges of the class of which they become members.

THE DEGREE OF MASTER OF LAWS.

The degree of Master of Laws is conferred on any graduate of this Department, who pursues the study of Law in this University for one year after graduation, and who completes to the satisfaction of the Law Faculty such a course of study as may be required; and the privilege thus extended to graduates of this Department is also extended to the graduates of other law schools who are entitled under the foregoing rules to advanced standing as members of the graduate class.

CERTIFICATES OF ATTENDANCE.

When a person is connected with the school for a period not entitling him to graduate, he may, on application to the Dean of the Department, receive an official certificate of attendance, which states the time of his attendance and the degree of his attainment.

LIBRARIES.

The Law Library contains the reports of every State in the Union, the reports of the Federal Courts, the English, Scotch, Irish, and Cana-

dian reports, the National Reporter System, the American Reports, the American State Reports, and the Lawyers' Reports Annotated. It also contains an extensive collection of treatises and text-books, both English and American, and copies of the statutes of the several States and of the United States. New reports, as they are issued, are added, as are new text-books and treatises of merit. The library is also well supplied with sets of selected and leading cases and of legal periodicals. The Journal of Jurisprudence (Edinburgh), the Law Quarterly Review (London), the American Law Review, the American Law Register, the Criminal Law Magazine, the Albany Law Journal, the Central Law Journal, the Juridical Review, the Green Bag, and others are regularly taken and kept on file.

The library was enriched some years ago by the gift of the valuable law library of the Honorable Richard Fletcher, formerly one of the Justices of the Supreme Court of Massachusetts.

The late Honorable Christian H. Buhl, of Detroit, bequeathed to the University for the Law Library the sum of ten thousand dollars. This gift, which has been used in the purchase of books, has added materially to the value and efficiency of the large collection of reports and text-books presented to the library by Mr. Buhl a few years ago, and known as the Buhl Law Library. It has enabled the Department to provide for its students library facilities that are second to none in the country.

The Library is open for consultation by students from 8 A. M. to 12 M., from 1:30 to 5:30 P. M., and from 7 to 10 P. M., during the academic year, except on Saturday afternoons and evenings. Students are not permitted to take the books from the library building, but during the hours named are allowed free access to them.

The General Library of the University (see page 21) is also open to use by students in the Department of Law.

WORK IN THE DEPARTMENT OF LITERATURE, SCIENCE, AND THE ARTS.

CONSTITUTIONAL HISTORY AND POLITICAL SCIENCE.

It seems to be conceded now that the law should be studied in a law school, and that the law school should be connected with a university, where students may avail themselves of opportunities for the study of such other branches of learning as are of allied significance.

It is believed that students in the Department of Law may derive great benefit from the instruction given on kindred subjects in the Department of Literature, Science, and the Arts (page 38). Students

who first obtain permission from the committee in charge of the combined work in the two departments (see below), are allowed to attend lectures delivered in that department, free of charge. But the Law Faculty reserve the right to require such students to give up any or all studies they may be pursuing in the other department, whenever it appears that the pursuit of these studies is attended with an unsatisfactory performance of the duties required in the Department of Law. Among the subjects regarded as particularly suitable for law students the following may be named: Political and Constitutional History of England; Constitutional History and Constitutional Law of the United States; Comparative Constitutional Law; History of the Middle Ages; Elements of International Law; History of Treaties; The Social, Sanitary, and Economic Sciences. (Compare pages 70 to 78.)

COMBINED COURSE IN COLLEGIATE AND LAW STUDIES.

Under an arrangement entered into by the Faculties of the two departments it is now possible for a student to carry on, to some extent and under certain conditions, collegiate studies and studies in law at the same time. The work of students who receive permission to enter upon the combined course is under the supervision of a joint special committee, consisting for the current year of Professors ADAMS, McLAUGHLIN, HUTCHINS, and KNOWLTON, and Assistant Professor LLOYD.

A fuller description of the combined course may be found on page 101.

MASTER'S DEGREE IN ARTS, PHILOSOPHY, SCIENCE, OR LETTERS.

A graduate of the Department of Literature, Science, and the Arts, who is a candidate for a degree in the Department of Law, may, by permission of the Faculties of the two departments, be enrolled at the same time in the Graduate School, as a candidate for a Master's degree in Arts, Philosophy, Science, or Letters (compare page 116). The privilege thus extended to graduates of this University is also extended to graduates of other colleges who satisfy the Faculty of the Department of Literature, Science, and the Arts, that the courses of study for which they obtained their first degree are equivalent to the courses of study required for the corresponding degree at this University.

Useful and desirable opportunities are thus afforded to college graduates who wish to study law and at the same time to supplement their professional studies with a broader knowledge of other branches that will be helpful to them in their professional work.

It is understood, however, that, if the work in the Department of Law is not satisfactory, the Law Faculty will require students of law to discontinue their studies for the Master's degree.

FEES AND EXPENSES.*

Matriculation Fee.—For Michigan students, *ten dollars*; for all others, *twenty-five dollars*.

Annual Fee.—For Michigan students, *thirty-five dollars*; for all others, *forty-five dollars*.

Diploma Fee.—For all alike, *ten dollars*.

For additional information in regard to expenses see page 36.

SUMMER SCHOOL OF LAW.†

For the summer of 1897, beginning July 5th and continuing for eight weeks, members of the Faculty of the Department of Law, will offer courses of instruction as described below. The work will consist of a thorough review of the leading topics of the law, designed especially to aid those who desire to review work already done for the purpose of preparing themselves to take examinations for admission to the bar, or who wish to secure advanced standing in the regular course of this or other law schools, or who wish to make up back work.

While this review is the primary object of the instruction, many topics will be treated in such a way as to make them desirable for those who wish a knowledge of certain subjects of the law as a part of a liberal education. For such persons the courses in Elementary Law, Contracts, Torts, Bills and Notes, and Personal Property, are particularly recommended.

The first eight subjects in the schedule given below are those usually found in the first year of regular three-year law courses, while the remainder comprises the leading subjects of the second year. The courses designated are, therefore, divided into two classes—one of first-year subjects, and one of second-year subjects—of about 125 hours each, or three hours a day for each class during the eight weeks. These classes are arranged so there is no conflict of subjects, and students can elect such subjects as they desire without limitation, except that no one is permitted to take more than twenty hours a week without special permission of the Faculty.

The work will consist of daily recitations from text-books and lectures.

*The Matriculation Fee and the Annual Fee must be paid in advance, and no student is allowed to select his seat until after such payment. No portion of the fees can be refunded, except by order of the Board of Regents, to students who leave the University during the academic year.

†A special Announcement will be sent, and further particulars given, upon application to Professor E. F. Johnson, Secretary of the Law Faculty.

ADMISSION.

While no examination for admission will be held, it is desired and expected that each applicant will present some evidence showing that he can pursue the work to his advantage, and such as will enable the Faculty to give proper advice as to subjects to be selected, etc. Each applicant should first apply to the Secretary of the Law Faculty and arrange for the courses to be taken and the amount to be paid. He must then register with the Steward of the University, and pay his fees to the Treasurer. On presenting the receipt of the Treasurer to the Secretary, he will be entitled to be enrolled as a student in the School.

COURSES OF STUDY.

During the summer of 1897, the following review courses of study will be given:

Elementary Law.—Blackstone's Commentaries, Book I and parts of Books III and IV. 10 hours. July 26–August 6. Assistant Professor JOHNSON.

Elementary Real Property. Blackstone's Commentaries, Book II 15 hours. August 9–27. Assistant Professor JOHNSON.

Contracts. Anson on Contracts. 20 hours. July 5–23. Professor KNOWLTON.

Criminal Law. Washburn on Criminal Law. 10 hours. July 26–August 6. Mr. HUGHES.

Torts. Cooley's Elements of Torts. 15 hours. July 5–23. Professor WILGUS.

Domestic Relations. Browne's Domestic Relations. 15 hours. August 9–27. Mr. HUGHES.

Personal Property. Smith's Personal Property. 15 hours. August 9–27. Mr. DWYER.

Common Law Pleading. Stephen's Common Law Pleading. 20 hours. July 19–August 6. Mr. DWYER.

Agency. Huffcut's Agency. 10 hours. July 26–August 6. Assistant Professor JOHNSON.

Partnership. Mechem's Elements. 10 hours. August 16–27. Mr. HUGHES.

Bailments. Lectures. 10 hours. July 19–23. Professor KNOWLTON.

Bills and Notes. Johnson's Elements. 15 hours. August 9–27. Assistant Professor JOHNSON.

Real Property, Fixtures, etc. Lectures. 15 hours. July 5–16. Professor THOMPSON.

Equity Jurisprudence. Lectures. 15 hours. July 5–23. Professor THOMPSON.

Equity Pleading. Thompson's Equity Pleading. 15 hours. August 9-27. Mr. DWYER.

Evidence. Reynolds's Theory of Evidence. 15 hours. July 26-August 13. Mr. HUGHES.

Corporations. 15 hours. July 19-August 6. Professor WILGUS.

FEES IN SUMMER SCHOOL.

The fee is \$35.00 for a course of 100 hours or over, subject to the limitation that no student is permitted to take more than twenty hours a week without special permission of the Faculty, and then only on the terms designated in each particular case. For the work in particular subjects the fees are \$4.00 for 10-hour subjects; \$6.00 for 15-hour subjects; and \$8.00 for 20-hour subjects. All fees are payable strictly in advance.

School of Pharmacy.

A special Announcement giving further information in regard to this School, and containing a register of residences and occupations of the alumni, revised each year so as to constitute a full professional directory, is published annually. For copies of this Announcement, or for other information relating to the School, address Professor A. B. Stevens, Secretary of the Faculty, or the Dean of the School of Pharmacy, Ann Arbor, Michigan.

THE School of Pharmacy gives training for all branches of pharmacy and for various chemical pursuits. It provides a well-grounded preparation for service as a manufacturing chemist or as an analyst. The graduate is assured a thorough qualification for the prescription table, and for the most responsible positions in pharmacy. He is fitted to act as the chemist of the medical profession. In respect to the discipline of both the intellectual and the executive powers, the work of the School offers decided advantages, in the steady requirement of severe studies, and of exact operations, on the part of each student.

The school year extends from the first day of October to the Thursday following the last Wednesday in June. Students of the first year are released the second Friday before Commencement. For special purposes admission may be granted at the beginning of the second semester, February 21, 1898. For the full regular work admission cannot be granted at any other time than at the opening of the first or the second semester, as students are instructed in classes in progressive order. For investigations, students can be received at any time when there is room in the laboratories.

REQUIREMENTS FOR ADMISSION.

[For admission to advanced standing, see page 182.]

[For admission of students not candidates for a degree, see page 182.]

The requirements for admission vary in some particulars with the applicant's previous training in practical pharmacy, and with the course of study he intends to pursue. Two courses are offered: a two-year course, leading to the degree of Pharmaceutical Chemist; and a four-year course, leading to the degree of Bachelor of Science in Pharmacy. The requirements are described below in two divisions, according to the degree which the student desires to take.

THE DEGREE OF PHARMACEUTICAL CHEMIST.

Applicants for admission to the two-year course, leading to the degree of Pharmaceutical Chemist, must be at least eighteen years of age.

It will be of advantage to the applicant to obtain at least a year of practical training in a drug store before entering the School. The required work leaves the student no time for an engagement in a drug store during the school year.

ADMISSION WITHOUT EXAMINATION.

From High Schools.—Applicants holding diplomas of graduation from any of the full courses of the schools approved by the Faculty of the Department of Literature, Science, and the Arts, and included in the list on pages 50 to 53, are admitted without examination, as are, also, graduates of four-year courses of other high schools of good standing.

From Colleges.—Students who have completed at least one year's work in an approved college of literature and science, and who bring explicit and official certificates describing their course of study and scholarship and testifying to their good character, are admitted without examination. Graduates of colleges of medicine or of pharmacy are also admitted without examination.

ADMISSION ON EXAMINATION.

Applicants who bring evidence of having been engaged in the practice of pharmacy for at least two years are admitted on examination in the following branches:

English.—Exercises in the writing of English with correctness. Especial regard is paid to orthography, punctuation, the use of capitals, grammatical construction, and rhetorical fitness.

Mathematics.—*Arithmetic.*—Fundamental Rules, Fractions (com-

mon and decimal), Denominate Numbers, Percentage, Proportion, Involution and Evolution, and the Metric System of Weights and Measures. *Algebra*.—Fundamental Rules, Fractions, Equations of the First Degree containing two or more unknown quantities.

Latin or German.—In Latin, Jones's First Latin Book, or an equivalent amount in any other text-book. Instead of Latin, German to the extent of a full year's study is accepted. Those who have a speaking and reading acquaintance with German are held to an examination in the grammar.

Other applicants are examined in the following branches:

English.—The same as given above.

Mathematics.—*Arithmetic and Algebra*.—The same as given above. *Geometry*.—The Elements of Plane Geometry as given in Olney's New Elementary Geometry, Beman and Smith's Plane and Solid Geometry, or an equivalent in other authors.

Latin or German.—The applicant may offer (1) three years of preparation in Latin; or (2) two years in Latin and one year in German; or (3) one year in Latin and two years in German. Those who offer three years in Latin are examined in the *grammar*—a thorough preparation in the elements; in *Prose Composition*—Jones's Exercises in Latin Prose Composition, or an equivalent in some other text-book; and in *Reading*—four books of Caesar's Commentaries and six select orations of Cicero, or an equivalent amount in some other text-book. Those who offer two years of Latin are examined as above, except in the orations of Cicero. Those who offer one year of Latin are examined in an amount equivalent to Jones's First Latin Book. Those who offer one year of German should have had daily recitations on the grammar during that time, accompanied by weekly exercises in writing, and the reading of seventy-five pages of some German reader. Those who offer two years of German should have devoted one year to the reading of some complete work of literary art.

Physics.—Carhart and Chute's Elements of Physics, or an equivalent.

Botany.—Practical exercises in the study of common plants, so conducted as to secure a familiar acquaintance with the essential facts of vegetable morphology, physiology, and relationship. The method pursued in Spalding's Introduction to Botany will indicate the kind of work desired. See page 41 for further information as to the extent of this requirement.

THE DEGREE OF BACHELOR OF SCIENCE IN PHARMACY.

The requirements for admission to the four-year course, leading to the degree of Bachelor of Science in Pharmacy, are and will be in every respect, whether on diploma or by examination, the same as the require-

ments for admission to the Department of Literature, Science, and the Arts, in the groups which fit students for pursuing the University studies required of candidates for the degree of Bachelor of Science. Of the four groups of requirements described on pages 39 to 45, Group III or Group IV gives suitable preparation for work leading to the degree of Bachelor of Science in Pharmacy; but persons who have completed the requirements of Group I or Group II will be admitted to the School on condition of making up the requirement in chemistry included in Group III. For the rules governing admission from diploma schools, and for a list of schools approved as qualified to prepare students for admission, see pages 48 to 53. The rule relating to admission conditions, printed on page 112, applies also to students admitted to the four-year course in the School of Pharmacy.

ADMISSION TO ADVANCED STANDING.

Students who have gained admission to the School may apply for credit in any of the college studies which they have pursued in another college, or in a high school whose graduates are admitted. Such application should be made to the Dean at the time of entering the School, and will be referred to the professor in charge of the studies in which credit is asked. In each case the professor will determine how much credit, if any, can be given. To this end he may appoint a time for examination of the applicant upon the study. Applicants are desired to bring explicit credentials as to the work done.

Students in the four-year course, applying for advanced credit, will govern their applications according to the rules in force in the Department of Literature, Science, and the Arts (page 45), though making their application to the Dean of the School of Pharmacy. Credits are received from the other departments, and from the Summer School, of this University. Not more than twelve hours of credit from the Summer School can be applied toward the degree of Bachelor of Science. Credits from other Schools of Pharmacy are adjusted separately for each study, as stated above. Owing to differences in the order and extent of the studies, credits cannot be counted in years of pharmaceutical college study.

ADMISSION OF STUDENTS NOT CANDIDATES FOR A DEGREE.

Persons over nineteen years of age who bring evidence of having been engaged in the practice of pharmacy for at least two years, may be admitted to pursue selected studies upon passing the admission requirement in English described on page 180. The same privilege is accorded to persons over twenty-one years of age who have had professional experience approved by the Faculty, whether it has been in pharmacy or in some other pursuit, the same examination being required as to the correctness of English writing.

Students admitted under the above provisions are not regarded as candidates for any degree, and they do not become eligible for graduation until they have passed all the examination for admission to the course leading to the degree which they seek to obtain. To become eligible for graduation with the degree of Pharmaceutical Chemist, the student must pass the examination for admission required of those who have been engaged in the practice of pharmacy. To become eligible for graduation with the degree of Bachelor of Science, the student must meet the full entrance requirements of the course leading to that degree.

Students not candidates for a degree may select such studies as they are found prepared to pursue, under the regulations of the Faculty. Courses of selected studies are arranged for students, to suit their purposes and qualifications. Selected studies may be continued so long as, in the judgment of the Faculty, they are carried with success and profit.

TIMES OF EXAMINATION.

For Admission to the Two-Year Course.—An examination for admission will be held on Wednesday and Thursday, September 29 and 30, 1897. The examination will begin at 9 A. M. on the first of the two days mentioned.

For Admission to the Four-Year Course.—The examination for admission will be held in connection with that of applicants for admission to the Department of Literature, Science, and the Arts (see page 47).

COURSES OF INSTRUCTION.

The courses of instruction comprise lectures, recitations, and laboratory work. The amount of work in each course is expressed in hours, an "*hour*" signifying one exercise a week during one semester. A lecture or recitation is usually one hour in length. A laboratory exercise employs three hours, more or less, being continued until the work assigned to one exercise, or a due proportion of the work assigned to the course, has been completed. The satisfactory completion of one exercise a week during one semester, including a sufficient standing in the examination held at the end of the semester, entitles the student to one *hour of credit* towards graduation. It is expected that a lecture or a recitation, with the personal study necessary to maintain the student's standing in the subject, will

take in all as much time as a laboratory exercise. Therefore an *hour of credit* is regarded as having the same value whether obtained in a course of lectures or in a course of laboratory exercises.

In the descriptive schedule that follows, the several courses in any subject are lettered in the order in which they are to be taken by the student. The numbers in brackets are numbers of similar or corresponding courses given in the Department of Literature, Science, and the Arts. A further description of these may be found on pages 80 to 93. The amount of credit towards graduation is indicated by the expressions *two hours*, *three hours*, etc.

PHARMACY.

COURSE A. Theory and Practice of Pharmacy. Lectures and recitations. *Three hours*. Second Semester. Assistant Professor STEVENS.

COURSE B. Operative Pharmacy and Pharmaceutical Preparations Laboratory work and recitations. *Ten hours*. First Semester. Assistant Professor STEVENS.

Course B must be preceded by Course A in analytical chemistry.

COURSE C. Pharmaceutical Technology and Prescription Practice. Lectures and work at the prescription stand. *Four hours*. Second Semester. Assistant Professor STEVENS.

PHARMACOGNOSY.

MICRO-BOTANY, PHARMACOGNOSY, PHARMACOLOGY (MATERIA MEDICA).

COURSE A. [Botany, Course 5.] Pharmacognosy and Organography. Practical Exercises. *Two hours*. First Semester. Assistant Professor SCHLOTTERBECK.

COURSE B. [Botany, Course 6.] Micro-botany. Lectures and laboratory work. *Three hours*. Second Semester. Assistant Professor SCHLOTTERBECK.

COURSE C. Pharmacognosy. Practical exercises. *Two hours*. First Semester. Assistant Professor SCHLOTTERBECK.

COURSE D. Materia Medica. Recitations and lectures. *Three hours*. First Semester. Assistant Professor SCHLOTTERBECK.

Course D may accompany Course C.

COURSE E. Pharmacognosy. Continuation of Course C. *Two hours*. Second Semester. Assistant Professor SCHLOTTERBECK.

COURSE F. *Materia Medica*. Continuation of Course D. *Two hours*.
Second Semester. Assistant Professor SCHLOTTERBECK.
Course F may accompany Course E.

GENERAL CHEMISTRY.

COURSE A [Course 1]. *Inorganic Chemistry, Descriptive and Experimental*. *Three hours*. First Semester. Mr. HIGLEY.

COURSE B [Course 5]. *Inorganic Chemistry, Descriptive and Experimental*. Continuation of Course A. Lectures. *Four hours*.
Second Semester. Professor FREER.

COURSE AA. *Inorganic Chemistry, Descriptive and Experimental*. Lectures and quizzes. *Five hours*. First Semester. Professor FREER.

Course AA is a beginning course extending further than Course A.

COURSE C. *Physics*. Lectures. *Four hours*. Second Semester. Mr. LICHTY.

ANALYTICAL CHEMISTRY.

QUALITATIVE ANALYSIS, QUANTITATIVE ANALYSIS, TECHNICAL ANALYSIS.

COURSE A [Course 1]. *Qualitative Analysis*. Laboratory work and recitations. *Ten hours*. Either First or Second Semester. Also given [as Course 3] *five hours*, in First Semester, and [as Course 3a] *five hours*, in Second Semester. Professor JOHNSON.

Course A should be preceded or accompanied by a course in general chemistry.

COURSE B [Course 4]. *Quantitative Analysis*. Laboratory work, lectures, and recitations. *Seven hours*. Either First or Second Semester. Professor E. D. CAMPBELL.

Course B must be preceded by Course A.

COURSE C [Course 2]. *Advanced Qualitative Analysis*. Laboratory work and recitations. Continuation of Course A. *Five hours*.
Second Semester. Professor JOHNSON.

COURSE D [Course 5]. *Advanced Quantitative Analysis*. Laboratory work. *Five hours*. Either First or Second Semester. Professor E. D. CAMPBELL.

Course D must be preceded by Course B.

COURSE E [Course 6]. *Iron and Steel Analysis*; or [Course 8] *Analysis of Minerals*. Laboratory work. *Five hours*. Professor E. D. CAMPBELL.

Course E is open to those who have completed Course B and have received special permission.

COURSE F. *Water Analysis*. Laboratory work and reading. *Three hours*. Either First or Second Semester. Professor PRESCOTT.

Course F must be preceded by Course B.

SHORTER COURSES IN QUALITATIVE CHEMISTRY FOR STUDENTS NOT
CANDIDATES FOR A DEGREE.

- (1) Three Months' Course in Qualitative Chemistry. Laboratory work and recitations. Begins October 1, January 5, March 29. The class sections are instructed by a graduate assistant under the direction of Professor JOHNSON.
- (2) [Course 3]. First Steps in Qualitative Analysis. Laboratory work and recitations. Either First or Second Semester. Professor JOHNSON.

Course (2) constitutes about one-half of Course A in analytical chemistry. It gives a little more analytical work than the three months' course.

ORGANIC CHEMISTRY.

INCLUDING ANALYTICAL AND APPLIED ORGANIC CHEMISTRY.

COURSE A [Course 10]. Carbon Compounds. Lectures. *Five hours.* First Semester. Professor PRESCOTT.

Course A must be preceded by a course in general chemistry and a course in analytical chemistry.

COURSE B [Course 11]. Organic Preparations. Laboratory work in organic synthesis. *Two hours.* Either First or Second Semester. Mr. TROWBRIDGE or Mr. DAVOLL.

Course B may accompany or follow Course A and may be taken in part, or extended, to make *one* hour or *three* hours of credit.

COURSE C [Course 12]. Organic Preparations and Ultimate Analysis. Laboratory work. *Five hours.* Either First or Second Semester. Mr. TROWBRIDGE or Mr. DAVOLL.

Course C may accompany or follow Course A, either in addition to or instead of Course B. Courses B and C may be continued, each for the same time and the same additional credit and under the same teachers, in either semester, constituting respectively Course BB [11a] and Course CC [13].

COURSE D [Course 14]. Organic Analysis, and Drug Assaying. Laboratory work and lectures. *Five hours.* Second Semester. Mr. DAVOLL.

Course D must be preceded by Course A and by a course in quantitative analysis.

COURSE DD. Sanitary and Commercial Organic Analysis. Laboratory work and reading. Continuation of, or alternative for, Course D. *Five hours.* Either First or Second Semester. Professor PRESCOTT and Mr. DAVOLL.

COURSE E. Toxicology. Inorganic and organic. Chemical and microscopical. Laboratory work and reading. *Three hours.* Either First or Second Semester. Professor PRESCOTT and Mr. DAVOLL.

Course E must be preceded by Course D.

COURSE F [Course 20]. Lectures on Chosen Subjects. *Two hours.* Second Semester. Professor PRESCOTT.

BEGINNING COURSES IN ORGANIC CHEMISTRY IN SECOND SEMESTER.

- (1) Organic Chemistry. Lectures. *Three hours.* Mr. TROWBRIDGE.
- (2) [Course 28]. Organic Chemistry. Lectures. *Four hours.* Professor PRESCOTT.

Courses (1) and (2) are intended primarily for classes in other departments of the University, and are open to students in the School of Pharmacy only by special permission.

PHYSIOLOGICAL CHEMISTRY.

COURSE A. Analysis of Urine. Laboratory work and lectures. *Five hours.* Professor NOVY.

Course A is given three times a year, beginning October 1, January 5, March 29. It must be preceded by a course in qualitative analysis and courses in general and in organic chemistry.

COURSE B [Course 7]. Physiological Chemistry, including the Analysis of Urine. Laboratory work and lectures. *Seven hours.* Either First or Second Semester. Professor NOVY.

Course B must be preceded by a course in qualitative analysis and courses in general and in organic chemistry, and it is advisable that it be preceded by a course in quantitative analysis.

COURSE C [Course 3]. Bacteriology. Laboratory work. *Five hours.* Professor NOVY.

Course C is given three times a year, beginning October 1, January 5, March 29.

COURSE D [Course 2]. Bacteriology. Lectures. *Five hours.* First Semester. Professor NOVY.

PHARMACOLOGY.

COURSE A. Laboratory work and reading. *Three hours.* Professor CUSHNY.

Course A must be preceded by Courses A and D in organic chemistry, and previous work in physiology would be of advantage. The course is open only to those who receive special permission.

COURSE B. Physiology. Lectures and recitations. *Five hours.* First Semester. Professor LOMBARD.

Course B must be preceded by a course in organic chemistry, and it is also desirable that the student have had studies in anatomy. The course is open only to those who receive special permission.

MINERALOGY.

COURSE A. Crystallography. Twelve lectures supplemented by practical exercises. Second Semester. Professor PETTEE.

COURSE B [Course 1]. Lectures and practice. *Two hours.* Either First or Second Semester. Professor PETTEE.

Course B should be preceded by a course in general chemistry. It includes Course A.

COURSE C [Course 2]. Lectures and practice. *Five hours.* Second Semester. Professor PETTEE.

Course C should be preceded by a course in general chemistry and a course in analytical chemistry. It includes Course B.

PHYSICS.

COURSE A [Course 1]. Mechanics, Sound, and Light. *Five hours.* First Semester. Dr. ST. JOHN.

Course A is open to those who have passed an entrance examination in physics, and to all others who have sufficient preparation. A knowledge of plane trigonometry is indispensable.

COURSE B [Course 2]. Electricity and Magnetism. Lectures. *Five hours.* Second Semester. Professor CARHART and Assistant Professor PATTERSON.

Course B must be preceded by Course A and by a course in general or in analytical chemistry.

RESEARCH.

Courses in Research, in either the first or the second semester, and under the provisions named below, are entitled to such *number of hours* of credit as shall be determined by the professors in charge of the work. In this determination the quality of the work is to be taken as a joint factor with the time it has employed.

A student, duly prepared by previous training, may be admitted to any work of investigation for which he may be suited, by permission of the professor in charge of the work, subject to the regulations of the School. The period of research is limited, for undergraduates, to the final semester in the two-year course, and to the senior year in the four-year course. Graduates of other colleges may enter at once upon research in this School. Holders of a Fellowship in this School must devote themselves wholly to research, and graduate students may do so if they desire. The research for a degree requires experimental work with the aim to obtain data not previously published. The indexing of

chemical and pharmaceutical literature, in form for publication, is accepted as a necessary adjunct of research.

EXAMINATIONS.

An examination upon each course of instruction is held at the time the work of the course is completed. The examinations, therefore, are held mostly at the end of a semester, in February and in June.

The result of an examination is reported to the Faculty by the professor in charge, for each student enrolled, in terms as follows:

Passed.—Entitling the student to full credit for the course.

Conditioned.—Imposing some specified condition, usually to take another examination, the condition to be fulfilled before credit can be given.

Provisionally Passed.—Withholding the credit from the course until the student shall have done better work in other studies, in the judgment of the Faculty as a whole, who can change the record of Provisionally Passed to a record of Passed, or Conditioned, or Not Passed, whenever such change shall be justified by the scholarship of the student in his several studies.

Not Passed.—Requiring the student to go over the regular exercises of the study again before he receives another examination.

Absent.—With statement of the cause of absence; if the student have left the class, stating at what time; or stating if absent without excuse or explanation.

SUCCESSION OF STUDIES.

I. IN THE TWO-YEAR COURSE.

First Year, First Semester.—General Chemistry AA; Analytical Chemistry A (qualitative); Pharmacognosy A.

First Year, Second Semester.—Analytical Chemistry B (quantitative); Pharmacognosy B (micro-botany); Pharmacy A; General Chemistry C (physics).

Second Year, First Semester.—Pharmacy B (laboratory and lectures); Organic Chemistry A; Pharmacognosy C and D (materia medica).

Second Year, Second Semester.—Organic Chemistry D (drug assaying); Pharmacy C (technology and prescription practice); Pharmacognosy E and F (materia medica); Mineralogy A (crystallography); Research.

The studies enumerated above are without exception required for the degree of Pharmaceutical Chemist. They constitute an amount of work which taxes the full working power of a student of average quickness and strength of scholarship. Students who desire a longer time for the

same work may apply for it on entering college, or during the first semester, and obtain from the Faculty a distribution of all the work through five semesters, or six semesters, as found advisable in each case.

II. IN THE FOUR-YEAR COURSE.

The student is limited by rule to *sixteen hours* of credit (sixteen exercises a week) in each semester.

The student must present, at the beginning of each semester, his election of studies for that semester, using a blank provided for that purpose. The elections of studies are subject to approval of the Faculty, who will take action upon them without delay, and all further adjustments of studies are to be completed as early as the second Monday of the semester. The studies prescribed for graduation are given on page 191. All the studies of the School are open to election.

ADVISORY SEQUENCE OF STUDIES.

Students who enter the School prepared in Latin, in German, and in chemistry, as high school studies, are advised to arrange their work in accordance with the scheme printed below. Students who enter with French instead of German, or without chemistry, are advised, in general, to follow the same scheme, with such modifications as may be necessary. Courses [A] and [B] in French are given in the Department of Engineering (page 134).

First Year, First Semester.—Mathematics [1 a], three hours; Physics [1], five hours; German, two hours; Pharmacognosy A, two hours; English [1 a], two hours.

First Year, Second Semester.—Mathematics [2 a], four hours; General Chemistry B, four hours; Pharmacognosy B, three hours; French [A], four hours.

Second Year, First Semester.—Analytical Chemistry A, ten hours; Pharmacognosy C, two hours; French [B], two hours; French, German, or other study, two hours.

Second Year, Second Semester.—Analytical Chemistry B, seven hours; Pharmacy A, three hours; Pharmacognosy E, two hours; Mineralogy B, two hours; French or German, two hours.

Third Year, First Semester.—Pharmacy B, ten hours; Organic Chemistry A, and a part of B, six hours.

Third Year, Second Semester.—Organic Chemistry D, five hours; Pharmacy C, four hours; Elective studies, not to exceed seven hours, taken from the following: Physiological Chemistry A, five hours, or C, five hours; Organic Chemistry BB, two hours, or C, five hours; French or German; Physics [2], five hours.

Fourth Year, First Semester.—Pharmacognosy D, three hours; Phar-

macology A, three hours, and B, five hours. Elective studies and studies in research.

Fourth Year, Second Semester.—Pharmacognosy E, three hours; Analytical Chemistry F, three hours; Organic Chemistry DD, five hours, or CC, five hours; Research.

III. IN SELECTED STUDIES.

Students not expecting to graduate can enter for selected studies at the beginning of the first semester (October 1), at the beginning of the second semester (February 21, 1898), and, for certain studies, January 4 and March 28, 1898.

For pharmaceutical purposes, the student who is limited to one year will do well to take the regular studies of the first year in the Two-Year Course.

Of the shorter courses usually most available for students having limited time the following may be named:

The Three Months' Course in Qualitative Chemistry beginning in October, January, or March; Pharmacy A and B; Pharmacognosy A and C; General Chemistry A and AA; Organic Chemistry [28] and the two-hour course for beginners; First Steps in Qualitative Analysis.

All the work of the School is open to students not candidates for a degree, so far as they are prepared to engage in it.

REQUIREMENTS FOR GRADUATION.

[Experience in the business of pharmacy in not made a requirement for a degree.]

THE DEGREE OF PHARMACEUTICAL CHEMIST.

The degree of Pharmaceutical Chemist is conferred upon students who have completed the courses of required study enumerated on page 189 and have obtained credit for examination in these courses in the manner above stated.

THE DEGREE OF BACHELOR OF SCIENCE IN PHARMACY.

To obtain the recommendation of the Faculty for the degree of Bachelor of Science in Pharmacy, the student must secure *one hundred and twenty Hours of Credit*. The prescribed portion of this work is as follows, the figures in brackets denoting courses given in the Department of Literature, Science, and the Arts:

In English: Courses [1], [1a].

In German: (a) for those who entered *without* German, Courses [1], [2]; or (b) for those who entered *with* German, Course [2].

In French: (*a*) for those who entered *without* French, Courses [1], [2], or an equivalent; or (*b*) for those who entered *with* French, four hours.

In Mathematics: Courses [1*a*], [2*a*].

In Physics: Course A [1].

In General Chemistry: (*a*) for those who entered *without* chemistry, Courses A, B, C; or (*b*) for those who entered *with* chemistry, Courses B, C.

In Analytical Chemistry: Courses A, B.

In Organic Chemistry: Courses A, C, D.

In Mineralogy: Course B.

In Pharmacognosy: Courses A, B, C, D, E, F.

In Pharmacy: Courses A, B, C.

From the other courses offered in the School, or in other departments of the University, the student must choose, with the approval of the Faculty, and complete enough, including those above prescribed, to make in all *one hundred and twenty* hours of credit.

STEARNS FELLOWSHIP.

The Stearns Fellowship in research was established in 1895, for a period of two years, by means of a gift made for this purpose by Messrs. Frederick Stearns & Company, of Detroit. The income of the Fellowship is three hundred dollars a year. In 1896-97 the research will be in organic chemistry and pharmacology. Appointments to the Fellowship are made by the Faculty from graduates of the School who have the qualifications for the work.

LIBRARY, BOOKS OF REFERENCE, AND TEXT-BOOKS.

The School has an extensive library, the main portion of which is shelved with the General Library of the University (see page 21.) It contains complete sets of the journals, the original repositories of the sciences related to pharmacy, as well as the current periodicals of the profession, encyclopædias and hand-books of chemistry and pharmacy, and the latest works of value in study. The works of reference in use in the School may be estimated at nearly four thousand volumes.

A working library, in a reading alcove of the chemical building, is provided with several hundred volumes for immediate reference, duplicates of those in the General Library. These works are in constant use by students in connection with their laboratory work, and in preparing for their recitations.

Files of current numbers of the journals of pharmacy of the United States are kept in the museum of the School (see page 25) where they are accessible to all students.

The text-books in use in the School include the following: In General Chemistry, Freer; in Qualitative Analysis, Prescott and Johnson; in Pharmacy, the U. S. Pharmacopœia, and Coblentz; in Botany, Bastin; in Pharmacognosy, Flückiger; in Materia Medica, Sayre, and White and Wilcox; in Organic Chemistry, Bernthsen; in Organic Analysis, Prescott.

FEES AND EXPENSES.*

Matriculation Fee.—For Michigan students, *ten dollars*; for all others, *twenty-five dollars*.

Annual Fee.—For Michigan students, *thirty-five dollars*; for all others, *forty-five dollars*.

Diploma Fee.—For all alike, *ten dollars*.

Laboratory Expenses.—These vary with the prudence and economy of the student, the average amount being about one dollar and twenty cents a week.

For additional information in regard to expenses see page 36.

* The Matriculation Fee and the Annual Fee must be paid in advance. No portion of the fees can be refunded, except by order of the Board of Regents, to students who leave the University during the academic year.

Homœopathic Medical College.

A special Announcement giving further information in regard to this College is published annually. For copies of this Announcement or for other information relating to the College, address Dr. Roy S. Copeland, Secretary of the Faculty, Ann Arbor, Michigan.

THE Homœopathic Medical College was established as a Department of the University in 1875. In 1895 the college was reorganized by the Board of Regents. Several radical changes were made, and better and more successful work is now done than ever before. In view of the increased facilities for teaching, it is believed that this college offers superior advantages to students who desire thorough instruction in homœopathy.

The college has commodious buildings on the University campus and, a few blocks distant, a new and well-equipped hospital.

The college year extends from the first day of October to the Thursday following the last Wednesday in June, and the full course covers four college years.

REQUIREMENTS FOR ADMISSION.

Every applicant for admission to the Homœopathic Medical College must be at least seventeen years of age, and must present to the Faculty satisfactory evidence of a good moral character.

Women are admitted, as to all other departments of the University, on the same conditions as men.

Matriculates in a regular course in the Department of Literature, Science, and the Arts (page 38), graduates of literary colleges of good

standing, graduates of approved diploma schools* and of other high schools of equal standing, are admitted without examination on presentation of proper evidence to the Secretary of the Faculty. For all others the requirements for admission are as follows:

English.—An essay of not less than two pages (foolscap), correct in spelling, punctuation, capital letters, grammar, and paragraphing.

Mathematics.—*Arithmetic.*—Fundamental Rules, Fractions (common and decimal), Denominate Numbers, Percentage, Proportion, Involution and Evolution, and the Metric System of Weights and Measures. *Algebra.*—Fundamental Rules, Fractions, Equations of the First Degree containing two or more unknown quantities. *Geometry.*—Plane Geometry.

Physics.—An amount represented by Carhart and Chute's Elements of Physics.

Botany.—The elements of Vegetable Anatomy and Physiology as given in Spalding's Introduction to Botany.

Zoology.—Packard's Zoology, briefer course; or McMurrich's Invertebrate Morphology.

History.—Myers's General History, or an equivalent; and Higginson's or Johnston's History of the United States.

Latin.—Jones's First Latin Book, or Harkness's Latin Reader, or an equivalent amount in any other text-book. An applicant who is not prepared to pass the examination in Latin, may take a condition in this subject, which condition he must remove before entering on the work of the second year.

Examinations for admission will be held Wednesday and Thursday, September 29 and 30, 1897. Applicants are required to present themselves on one of these days, as they are expected to be in attendance on the first day of the term, when the regular course of instruction begins. To provide for cases in which it is absolutely impossible for the applicant to be present at the time announced, supplementary examinations will be held at such time as may be determined upon by the Faculty; but no excuse, except of an urgent character, will be accepted for failure to appear at the first examination.

Before admission to examination, every applicant is required to present to the Secretary of the Faculty the Treasurer's receipt for the payment of the matriculation fee and the annual fee. It will, therefore, be necessary for him to apply first to the Steward at his office in University Hall, register his name as a student in the Homœopathic Medical College, and pay his fees to the Treasurer. In case of rejection, the money paid preliminary to examination will be refunded.

* The diploma schools comprise all those approved by the Faculty of the Department of Literature, Science, and the Arts. For a list of these see page 50.

ADMISSION TO ADVANCED STANDING.

Persons who have studied medicine elsewhere may be admitted to advanced standing upon evidence of proficiency in the studies which have already been pursued by the class to which they seek admission.

Students in the Department of Literature, Science, and the Arts, who desire to study medicine in this college can gain advanced standing by taking, as a part of their work in that department, courses practically identical with some of those prescribed for graduation in medicine. By making proper choice of elective studies, it is possible for a student to earn the two degrees, Bachelor of Science and Doctor of Medicine, in six years (compare pages 98 to 101 and 152). Students desiring to take advantage of this opportunity for combining literary and professional work should consult Professor W. B. Hinsdale, Dean of the College.

COURSE OF INSTRUCTION.

Surgery.—A complete course of lectures on minor surgery and bandaging is given to students of the first year.

A complete course of lectures on operative surgery, fractures, and dislocations, and on the principles of surgery, is given to students of the third and fourth years.

Candidates for graduation are required to demonstrate their knowledge of operative surgery by operations on the cadaver, a requisite number being provided by the authorities without expense to the class.

Students are assigned cases to diagnose and present to the class; and, under the direction of the assistant to the chair of surgery, they are allowed to make the necessary preparations for operations, and to assist, when assistance is required. Advanced students, under the immediate supervision of the surgeon in charge, are also allowed to treat patients that have been operated upon.

Materia Medica and Therapeutics.—Throughout the entire year three lectures are given weekly upon these most important subjects. Each one of the principal remedies is considered separately and comparatively with relation to its physiological action and pathological effects, to morbid anatomy, and to symptomatology. All there is known about these remedies, so far as they are practically applicable to the cure of disease, is taught.

Pharmacy and Pharmacology.—Each student is required to prepare from the crude material, ready for use, a series of remedies. A practical course in field medical botany is given by a demonstrator who goes with the class to the place where native medicinal plants are found growing in their natural condition. The plants are gathered and prepared for making mother tinctures and trituration.

The Principles of Medicine.—The principles of medicine are taught

in a separate course in which the scientific explanation of disease, and the principles upon which a system of cure must be constructed, are discussed. Especial attention is given to historic medicine and the various systems that have been in vogue as means of attempted cure. In the medical clinic the idea is never lost sight of that the function of the physician is to cure the sick, and that to accomplish this end accurate prescribing is of the highest importance.

Theory and Practice.—The instruction in theory and practice is didactic and clinical. The subject is divided into separate courses covering all the ground, both general and special, with which a physician in general practice must be familiar. The aim is to make the student, by applying his knowledge of pathology, a good diagnostician, and, by his knowledge of materia medica, a good prescriber. In the clinics especial attention is given to dietetics and other regimenal means of treatment.

Physical Diagnosis.—Physical diagnosis is taught as a separate branch, with the use of a text-book supplemented by lectures and practical demonstrations. The course occupies one hour a week throughout the entire year.

Obstetrics, Gynæcology, and Pædology.—The course of study in these several branches is so arranged that separate lectures are given to the several classes in a graded course. Students of the first year are drilled in the fundamental branches of gynæcology, and are taught the use of instruments, the various methods of making gynæcological examinations, etc. With the third year the student enters upon both didactic and clinical work. In the last year of the course lectures are delivered upon special subjects and the senior students are required to make physical and local examinations in the sub-clinics of this department, thus familiarizing themselves with the various methods of practicing touch, palpation, obstetric auscultation, etc., and utilizing to the best possible advantage the many patients availing themselves of this special department of the clinic. Cases of obstetrics are assigned to each senior for his especial delivery and personal attendance.

Ophthalmology, Otology, and Laryngology.—Regular lectures on these important specialties, amply illustrated from the abundance of clinical material at the disposal of the Faculty, are given in the third and fourth years. The eye-and-ear, nose, and throat clinic forms one of the most interesting features of the clinical work, and affords the class every facility for a thorough practical study of all the diseases of these organs, that come under the observation of the physician. Students have cases assigned them for dressing and treatment, from time to time, and thus acquire practical skill and knowledge in diagnosis, in the use of the various instruments, and in the correction of errors of refraction.

Mental Diseases.—A special course of lectures on mental diseases is given by Dr. Oscar R. Long, Superintendent of the Michigan Asylum for Insane Criminals.

Demonstration Courses in the Specialties.—Before graduation each student is required to do actual work in demonstrating his medical and surgical skill. By operation upon the cadaver and upon animals; by manipulation of manikins and models; by actual dressing of wounds and bandaging; by thorough drill in the practical use of the ophthalmoscope, the laryngoscope, the test case and spectacle fitting; by the use of the microscope and spectroscope; by the making of tinctures and dilutions; by bedside demonstrations and examinations; by actual prescribing; by these methods the students become practical and are prepared to make successful physicians. The classes are divided into sections, and each individual has his share of actual work. For these demonstration courses there is no extra expense. Students also assist at operations and take turns in ward visiting. It is believed that the advantages offered for the practical application of theoretical knowledge are unsurpassed in this country. Students come in personal contact with the members of the Faculty and profit accordingly.

INSTRUCTION FOR WOMEN.

The course of instruction for women is in all respects equal to that for men. Practical Anatomy is pursued by the two sexes in separate rooms; but in the lectures, in public clinics, in the laboratories, and in various class exercises, it is found that both sexes may attend with propriety at the same time.

SCHEDULE OF STUDIES.

The following schedule shows the arrangement of studies for the course of four years. Three or more lectures are given each forenoon; the afternoons are devoted to laboratory and to clinical work. The subjects taught by members of the Faculty of the Department of Medicine and Surgery are marked with an asterisk (*). For further information in regard to this work see page 149.

FIRST YEAR.

LECTURES AND RECITATIONS IN FIRST SEMESTER.

<i>Subjects.</i>	<i>Time Required.</i>
Principles of Medicine,	1 hour a week.
*Osteology,	2 hours a week.
*General Anatomy,	2 hours a week.
*General Chemistry,	5 hours a week.
*Qualitative Analysis,	2 hours a week.
*Bacteriology,	4 hours a week.

LECTURES AND RECITATIONS IN SECOND SEMESTER.

<i>Subjects.</i>	<i>Time Required.</i>
Materia Medica,	2 hours a week.
Pharmacy,	1 hour a week.
*General Anatomy,	2 hours a week.
*Physics,	4 hours a week.
*Organic Chemistry,	5 hours a week.
*Histology,	4 hours a week.

LABORATORY WORK IN FIRST YEAR.*

<i>Subjects.</i>	<i>Time Required.</i>
*Anatomy,	Every day for 12 weeks.
*Chemistry,	Every day for 12 weeks.
*Bacteriology,	Every day for 12 weeks.

SECOND YEAR.

LECTURES AND RECITATIONS IN FIRST SEMESTER.

<i>Subjects.</i>	<i>Time Required.</i>
Materia Medica,	2 hours a week.
Minor Gynæcology,	1 hour a week.
Principles of Medicine,	1 hour a week.
Theory and Practice,	1 hour a week.
Surgery,	2 hours a week.
*Physiology,	5 hours a week.
*Hygiene,	3 hours a week.
*Embryology,	2 hours a week.

LECTURES AND RECITATIONS IN SECOND SEMESTER.

<i>Subjects.</i>	<i>Time Required.</i>
Materia Medica,	2 hours a week.
Minor Gynæcology,	1 hour a week.
Principles of Medicine,	1 hour a week.
Theory and Practice,	1 hour a week.
Surgery,	2 hours a week.
*Physiology,	5 hours a week.
*Physiological Chemistry,	3 hours a week.
*Hygiene.	2 hours a week.

LABORATORY WORK IN SECOND YEAR.

<i>Subjects.</i>	<i>Time Required.</i>
*Anatomy,	Every day for 12 weeks.
*Physiological Chemistry,	Every day for 12 weeks.
*Histology,	Every day for 6 weeks.

*Four to five hours constitute a day's work in the laboratory.

THIRD YEAR.

LECTURES AND RECITATIONS IN THIRD YEAR.

<i>Subjects.</i>	<i>Time Required.</i>
Minor Gynæcology,	1 hour a week.
Major Gynæcology,	2 hours a week.
Obstetrics,	2 hours a week.
Surgery,	3 hours a week.
Theory and Practice,	3 hours a week.
Ophthalmology, Otology, and Laryngology,	3 hours a week.
Materia Medica,	3 hours a week.
*Pathological Histology,	2 hours a week.

LABORATORY WORK IN THIRD YEAR.

<i>Subject.</i>	<i>Time Required.</i>
*Practical Pathology,	Every day for 5 weeks.

CLINICAL COURSES IN THIRD YEAR.

<i>Subjects.</i>	<i>Time Required.</i>
General Medicine,	2 hours a week.
Surgery,	2 hours a week.
Gynæcology,	2 hours a week.
Ophthalmology, Otology, and Laryngology,	2 hours a week.

FOURTH YEAR.

LECTURES AND RECITATIONS IN FOURTH YEAR.

<i>Subjects.</i>	<i>Time Required.</i>
Theory and Practice,	4 hours a week.
Surgery,	4 hours a week.
Obstetrics and Gynæcology,	4 hours a week.
Materia Medica and Therapeutics,	4 hours a week.
Ophthalmology, Otology, and Laryngology,	3 hours a week.
Pathology,	2 hours a week.
Mental and Nervous Diseases,	1 hour a week.
Pædology,	1 hour a week.

CLINICAL COURSES IN FOURTH YEAR.

<i>Subjects.</i>	<i>Time Required.</i>
General Medicine,	1 afternoon a week.
Surgery,	2 afternoons a week.
Gynæcology,	1 afternoon a week.
Ophthalmology, Otology, and Laryngology.	2 afternoons a week.

EXAMINATIONS.

At the end of each semester examinations (written, oral, or both written and oral) are held on all subjects taught during the semester,

and each student's grade is entered upon the records of the Faculty. Students "*conditioned*" cannot apply for another examination in the same subject until the close of the next course or semester, except that a student conditioned at the close of the college year may ask for another examination in the first two weeks of the following year. Students reported "*not passed*" are required to take the course over again before applying for another examination.

REQUIREMENTS FOR GRADUATION.

To be admitted to the degree of Doctor of Medicine, a student must be twenty-one years of age and possess a good moral character. He must have completed the required courses in laboratory work, and have passed satisfactory examinations on all the required studies included in the full course of instruction. He must have been engaged in the study of medicine for the period of four years, the last two of which must have been in this college.

GRADUATE COURSES.

Medical science has made such rapid progress during recent years that graduates of a short time ago feel the necessity of returning to the medical centres for further light in the modern advances. The laboratories and special courses of this college offer superior advantages to graduates. Any physician desiring to avail himself of the privileges here offered should correspond with the Secretary of the Faculty.

The nature of the work arranged for graduate students in hygiene, bacteriology, electrotherapeutics, pathology, physiology, histology, chemistry, and anatomy may be learned by a reference to pages 153 and 154.

In the practical branches, such as materia medica, physical diagnosis, surgery, ophthalmology, otology, laryngology, obstetrics, and gynæcology, graduate instruction may be had, by special arrangement with the professors in charge, in connection with the demonstration courses given to students in the last two years of their course.

FACILITIES FOR INSTRUCTION.

Museums and Laboratories.—The museums of anatomy and materia medica, comprising thousands of specimens, models, and charts, afford the best means attainable for the close study of anatomy, physiology, and pathology. The general and special cabinets of the University, containing about 250,000 specimens, are also open freely to all students. (Compare pages 23 to 27.) The facilities for the study of chemistry,

afforded by the chemical laboratory, are not excelled in any medical college in this country, and the arrangements for the laboratory work are such that medical students, in classes, and working under the direction of the professors in charge, receive practical instruction in the courses in qualitative chemistry and in the analysis of urine, a knowledge of which has become absolutely indispensable to the successful physician. The histological laboratory, amply supplied with microscopes, sphymographs, stereopticon, etc., offers rare facilities for the prosecution of practical work in experimental physiology and histology. The hygienic and anatomical laboratories are models of beauty and convenience, affording facilities for instruction in hygiene and in practical anatomy, unsurpassed, if equalled, by those of any other institution of learning in the United States. For a more full description of the laboratories of the University used by homœopathic students in common with students of other departments, see pages 27 to 31, and 155 to 160.

Libraries.—The General Library of the University (see page 21) is open to the free use of students. Important additions have recently been made to the collection of works on homœopathy. There is also a free reading room in the Homœopathic Building, where all the homœopathic publications of note are kept on file.

Other Facilities.—Students in the Homœopathic College have the privilege of attending the scientific and philosophical lectures, collateral to medicine, given in the Department of Literature, Science, and the Arts. For a description of the Waterman Gymnasium, and the conditions on which it is open to students, see page 32.

THE UNIVERSITY HOSPITAL, HOMŒOPATHIC.

The University Hospital, Homœopathic, is in charge of a competent resident medical officer and an experienced matron, and is provided with a corps of trained nurses; it contains large, airy, and well-lighted wards for male and female patients, private rooms for special patients, rooms for antiseptic surgery and for lying-in cases, dispensary, etc., all under the immediate direction of the Faculty, the members of which attend upon the sick in the hospital, and draw from them the material for clinical instruction.

The surgical, medical, gynæcological, and ophthalmological clinics are held daily in the spacious clinical amphitheatre, at which times examinations of patients are made by the professors in charge, or by students under the direction of professors, prescriptions given, and surgical operations performed in the presence of the class. The several clinics are held on separate days, of which the profession throughout the State will be notified.

In addition to special rooms with all modern apparatus and appliances for antiseptic surgery, there is a lying-in ward. Each senior student is required to attend cases of labor and become familiar with the duties of the lying-in room, under the immediate direction of a member of the Faculty.

The hospital is furnished with all modern electrical appliances, and, where indicated, skilled attendants apply electrical treatment. The junior and senior students receive special instruction in this line.

Much attention is paid to physical diagnosis, and the abundance of clinical material furnishes many interesting cases. Students are required to take the history of patients and, under proper supervision, make personal examination and prescriptions. It is the aim of the Faculty to make clinical instruction systematic and thorough.

The hospital is kept open for patients during the college year, but no contagious diseases are admitted. Under the present organization, patients are much better accommodated, and clinical instruction is rendered more systematic and efficient than was formerly possible. The expenses to patients are only for their board, for unusual appliances or special nursing, and for medicines, the services of the Faculty being rendered gratuitously to those made available for clinical instruction.

Patients who desire to enter the hospital are requested to write to the medical superintendent to ascertain if there is room for their accommodation, and to obtain a circular giving more fully the rules governing admission.

Training School for Nurses.—In connection with the Hospital there is a training school for nurses under the charge of a competent and experienced principal. The term of study and service extends through two years, at the expiration of which time those who have proved trustworthy are granted certificates of graduation. For further information in regard to this school application may be made to the Medical Superintendent of the University Hospital, Homœopathic.

FEES AND EXPENSES.*

Matriculation Fee.—For Michigan students, *ten dollars*; for all others, *twenty-five dollars*.

Annual Fee.—For Michigan students, *thirty-five dollars*; for all others, *forty-five dollars*.

Diploma Fee.—For all alike, *ten dollars*.

* The Matriculation Fee and the Annual Fee must be paid in advance, and no student can select his seat until after such payment. No portion of the fees can be refunded, except by order of the Board of Regents, to students who leave the University during the academic year.

Laboratory Expenses.—In the laboratories, the students pay for the material used, and the expenses vary somewhat with the care and economy practiced. The required laboratory courses cost approximately as follows:—

Anatomy	\$20.00
Chemistry	15.00
Bacteriology	15.00
Physiological Chemistry.....	15.00
Histology.....	7.00
Pathological Histology.....	10.00

The total amount of fees paid to the University during the whole four years' course, for matriculation, incidental expenses, materials used, and diploma, is, for Michigan students, about \$240.00, and for others about \$295.00, varying a little with the student's actual laboratory expenses.

For additional information in regard to expenses see page 36.

Students arriving in Ann Arbor, and desiring further information, should apply at the office of the Faculty, in the Homœopathic College, North University Avenue. The office will be open daily during the last week in September, and members of the Faculty, or some one who can give information, will be in attendance.

College of Dental Surgery.

A special Announcement giving further information in regard to this College is published annually. For copies of this Announcement, or for other information relating to the College, address Dr. J. Taft, Dean of the College, Ann Arbor, Michigan.

THE College of Dental Surgery was established as a Department of the University in 1875. The college year extends from the first day of October to the Thursday following the last Wednesday in June. The lectures close about June 15, in order to allow time for the final examinations before Commencement.

REQUIREMENTS FOR ADMISSION.

Applicants for admission must be at least eighteen years of age, and must present to the Faculty satisfactory evidence of good moral character. This should be in the form of a letter from a reputable dental or medical practitioner in the place from which the applicant comes.

Matriculates in the other scientific departments of the University, and graduates of recognized colleges, academies, or high schools, are admitted without further examination on presentation of proper diploma or certificate. Commercial and English diplomas are accepted only so far as they include the studies indicated in the scheme for examination as printed below. Applicants are requested to bring or send to the Secretary of the Faculty a letter from the superintendent of the school from which the diploma was obtained, naming the subjects studied and the credit given for each study.

All other applicants are examined as to their previous education and their fitness to enter on the technical study of dentistry. The subjects on which examinations are held are as follows:

English.—An essay of not less than one page (foolscap), correct in spelling, punctuation, capital letters, grammar, sentential structure, and paragraphing.

History.—Myers's General History, or an equivalent, and Higginson's or Johnston's History of the United States.

Mathematics.—*Arithmetic.*—Fundamental Rules, Fractions (common and decimal), Denominate Numbers, Percentage, Proportion, Involution and Evolution; and the Metric System of Weights and Measures.

Algebra.—Fundamental Rules, Fractions, Equations of the First Degree, containing two or more unknown quantities. *Geometry.*—Plane Geometry.

Physics.—An amount represented by Avery's Natural Philosophy or Carhart and Chute's Elements of Physics.

Latin.—Jones's First Latin Book, or Harkness's Latin Reader, or an equivalent amount in any other text book.

Botany, Zoology, Physical Geography, and Physiology.—The applicant must offer *two* of these subjects. The requirements in each subject are as follows:

Botany.—The elements of Vegetable Morphology and Physiology as given in Spalding's Introduction to Botany.

Zoology.—Packard's Zoology, breifer course.

Physical Geography.—Tarr's Elementary Physical Geography, especially chapters 9 to 21 inclusive, or an equivalent.

Physiology.—Martin's The Human Body.

Entrance examinations are held in Ann Arbor at 10 A. M., the last Wednesday in June, and at 10 A. M., September 30th. Applicants are expected to be present at one of these dates, but to provide for cases in which it is impossible for the applicant to be present, other examinations are held at such times as may be determined by the Faculty.

Before admission to the examination, every student is required to present to the Dean of the Faculty the Treasurer's receipt for the payment of the matriculation fee and the annual fee. It will therefore be necessary for the candidate to apply first to the Steward at his office in University Hall, register his name as a student in the College of Dental Surgery, and pay his fees to the Treasurer. In case of rejection, the money paid preliminary to examination will be refunded.

Admission examinations are also held at times designated by the examiners between June 1 and September 15 of each year, at the places and by the persons named below:

Dr. William Mitchell, No. 39 Upper Brook St., London, W., England.

Dr. Victor H. Jackson, 240 Lenox Ave., New York, N. Y.

Dr. Alfred W. Hoyt, 243 Wabash Ave., Chicago, Ill.

Dr. Immer C. St. John, Minneapolis, Minn.

Dr. J. Taft, northeast corner of George and Elm Sts., Cincinnati, O.

These examinations are conducted in writing, and the papers written

by the applicants are sent to Ann Arbor to be passed upon by the Faculty of the College.

In order to receive credit for a full course, students must enter within ten days after the opening of the college year. Students are allowed to enter, however, at the beginning of the second semester (February 21, 1898) and receive credit for a half-year's work. It is very important that first-year students be present promptly at the opening of the year.

ADMISSION TO ADVANCED STANDING.

Persons having qualifications for admission to this college, and having studied dentistry in other recognized schools for at least one year, may be admitted to advanced standing after having passed a satisfactory examination on all the studies which have already been pursued by the class to which they seek admission.

Graduates of the Department of Medicine and Surgery (page 147) or other medical college of equal rank, are allowed credit toward graduation for so much of the required course in dentistry as was included in their medical course.

ASSIGNMENT OF SEATS.

Students are allowed to select seats in the lecture room and places in the dental laboratory in the order in which they matriculate; and each student is expected to occupy the seat so selected during the session.

COURSE OF INSTRUCTION.

In the arrangement of the course of study it is the aim to make it such as will meet the requirements of the student and the expectation of the profession, and will secure the greatest benefit to the public. To accomplish these objects, and to accommodate and benefit those students who desire a thorough dental education, the course of instruction is made to cover three college years of nine months each. The course thus affords time for the teaching and study of subjects not generally taught; and especially does it give time for thorough work in the laboratories. Though not fully covering the defects of preliminary education, this course supplemented by repeated examinations and written exercises, remedies some deficiencies of earlier training and is of itself an efficient means of mental discipline, and of professional and scientific culture.

In the arrangement of the work a graded course of study is combined with repetition of such lectures only as will avoid the confusion incident

to the presentation of too many parts of the general subject to the mind of the student at an early period of his studies, and also obviate the objection of dismissing one part of a subject before its relations to other parts can be seen and appreciated.

*SCHEDULE OF STUDIES.**

FIRST YEAR.

FIRST SEMESTER.

<i>Subjects.</i>	<i>Hours.</i>
Osteology and Anatomy,	51
General Chemistry,	85
Prosthetic Dentistry,	17
Dental Laboratory Work,	400

SECOND SEMESTER.

<i>Subjects.</i>	<i>Hours.</i>
Organic Chemistry,	51
Descriptive Anatomy,	51
Histology (lectures),	51
Prosthetic Dentistry,	17
Dental Laboratory Work,	400

SECOND YEAR.

FIRST SEMESTER.

<i>Subjects.</i>	<i>Hours.</i>
Physiology,	85
Bacteriology,	68
Operative Principles and Materials,	17
Prosthetic Dentistry,	17

SECOND SEMESTER.

<i>Subjects.</i>	<i>Hours.</i>
Dental and Comparative Anatomy,	34
Physiology,	85
Operative Principles and Materials,	17
Prosthetic Dentistry,	17

The following subjects are also included in the work of the second year, making a continuous course of laboratory instruction running through the year. The hours for laboratory work must be chosen at the

*The column of hours gives the total number of hours of work required for each semester.

opening of the year, preference being allowed in the order of registration.

<i>Subjects.</i>	<i>Hours.</i>
Regulating and Porcelain Technique,	80
Dissection,	120
Histological Laboratory Work,	80
Qualitative Chemistry,	120
Operative Technique,	120

THIRD YEAR.

FIRST SEMESTER.

<i>Subjects.</i>	<i>Hours.</i>
Dental Surgery and Pathology,	51
Oral Surgery,	34
Dental Medicine,	51
Orthodontia and Oral Deformities,	17
Prosthetic Clinic,	170
Operative Dentistry,	17
Operative Clinic,	250

SECOND SEMESTER.

<i>Subjects.</i>	<i>Hours.</i>
Dental Surgery and Pathology,	51
Oral Surgery,	34
Dental Medicine,	51
Orthodontia and Oral Deformities,	17
Prosthetic Clinic,	170
Operative Dentistry,	17
Operative Clinic,	250

DESCRIPTION OF COURSES.

Anatomy is studied didactically and practically. A full course on general osteology is taken with the medical classes in the Department of Medicine and Surgery (page 147). A special course of sixty lectures is given to students of dentistry on the anatomy of the head, face, neck, thorax, abdomen, and their contained viscera, and on the nervous and vascular systems; from six to eight lectures are given on the extremities and pelvic region. In practical anatomy the same regions are dissected, independent of the medical classes, though under the same demonstrator. The most careful consideration is given to the parts of immediate concern to dental students. The didactic course is taken during the freshman year, and the practical course at the beginning of the junior year. By this arrangement the practical course is more carefully done, and serves as a review exercise to fix the subject more thoroughly in the

memory. The work in anatomy also includes a course in regional dental, and comparative dental anatomy. This is in the nature of a series of quiz exercises on the technical anatomy of the face and mouth; on cutting and studying the structures of human teeth in sections; and an inspection and discussion of the characteristic differences in animal dentition. The large odontological museum, the gift of the late Professor Ford, offers exceptional opportunities for this work.

In the histological laboratory the student not only acquires a knowledge of the principal structures and tissues of the animal body, but also becomes familiar with the workings and uses of the microscope.

In chemistry students are required to attend lectures on general chemistry, and also to take a course in analytical chemistry with special reference to those agents or secretions that concern their future needs. A course in analysis of saliva is optional.

In dental materia medica a special course of lectures embraces the history, pharmacy, pharmacology, and therapeutics of all drugs and remedies used in the treatment of diseases occurring in dental practice, and includes a discussion of pain obtundents, local and general anæsthetics, and prophylactic remedies.

In dental pathology and surgery a course of lectures embraces a discussion of the various diseases which affect the teeth and mouth, and their etiology and treatment. Special attention is given to diseases which pertain peculiarly to the practice of dentistry. Illustrative cases are shown and operated on in the presence of the class. All instruments, appliances, and methods that are of interest or value in this connection are exhibited and discussed.

A course of lectures on clinical oral surgery embraces a consideration of diseases of the mouth and associated parts that are of special interest to the dentist, but which lie more within the province of the medical surgeon for treatment. Illustrative cases are exhibited and discussed, and operations performed before the class.

In operative dentistry the instruction is both didactic and practical. In the didactic course a full presentation of approved methods, appliances, and materials used in filling teeth is given, together with the principles which form the basis of practice. This instruction is supplemented by practical instruction in the clinical operating room, which is under the personal supervision of the professor of operative and clinical dentistry and his assistants. Here each student is required to spend fifteen hours a week at the chair, operating for patients, and in this way confirming the principles taught and obtaining such manipulative training as will result in desirable preparation for skilful practice.

In prosthetic dentistry the instruction is both didactic and practical. In the lectures the principles involved in the construction and applica-

tion of artificial dentures, crowns and bridges, regulating devices, and continuous gum and cleft palate work are fully discussed, and such methods as have proved valuable and worthy are advocated. In the practical department each student in the second year has opportunity and is required to construct and adapt to the mouth practical dentures for the restoration of lost dental organs.

The instruction in dental mechanism embraces experimental construction of the various artificial dentures used to restore lost dental organs. Twenty-five hours a week in the first year are devoted to this work. It consists of taking impressions, making plaster models from impressions, making dies, swedging plates, grinding and adjusting teeth, soldering and finishing, vulcanizing and finishing plates, pouring and finishing cast metal, celluloid, and continuous gum plates, with such instruction as will familiarize the student with the most approved methods for constructing artificial substitutes. The junior class devotes eighty hours to regulating technique; and one hundred and twenty hours to operative technique, in which sections of teeth are made and studied, and cavities are formed in teeth outside of the mouth and filled with cement, guttapercha, tin-amalgam, and gold.

EXAMINATIONS.

All students of the first and second years are obliged to pass examinations on all the required branches of their respective courses before leaving the college at the end of the year. These examinations are held at the close of each semester, and no student who has failed to pass two of the required branches in his course, is admitted to an advanced class during the first semester of the following year. No standing is given or certificate issued to any one who has failed to pass any of these examinations. Certificates of time are given for the actual period of attendance only.

REQUIREMENTS FOR GRADUATION.

To be admitted to the degree of Doctor of Dental Surgery, the candidate must be twenty-one years of age, must possess a good moral character, must have devoted three years to the study of dentistry, and have passed all the examinations required in his course. Unless admitted to advanced standing, he must have attended three full years in this college. It is recommended that he attend these consecutively.

Every candidate is required to write from time to time upon the various branches of his course, and may at the discretion of the Faculty be required to prepare a thesis upon some assigned topic; he must present for inspection practical operations performed by himself in this

college, and give satisfactory evidence of his skill and ability as a practitioner.

GRADUATE COURSE.

The purpose of the graduate course is to meet the requests of a continually increasing number of students for further opportunity to pursue the scientific branches of the regular college curriculum, and also to meet an often expressed wish on the part of practitioners to pursue some special scientific investigation, which has been entered upon at home, with limited resources in the way of books of reference, laboratory facilities, and apparatus, and without the aid of instructors or adviser in associated sciences.

The graduate course is open only to graduates of this college, who have made marked records in their undergraduate work, and to graduates of this and other colleges who have had at least two years of continuous practice since graduation, and who have published original articles of scientific value showing a capacity on their part for continuing such work with credit.

The course of study is independent of, and additional to, the regular undergraduate work, and embraces only such topics as will aid in training men to carry on scientific researches in subjects associated with practical dentistry, or with dentistry in its scientific aspect. As at present arranged, the work in the first semester deals principally with *materia medica*; and in the second with pathology, according to the following schedule:

FIRST SEMESTER.

<i>Subjects.</i>	<i>Hours.</i>
Laboratory work in Chemistry (general and organic),	100
Laboratory work in Physiology, or <i>Materia Medica</i> ,	70
Original research on some dental remedy,	200

SECOND SEMESTER.

<i>Subjects.</i>	<i>Hours.</i>
Laboratory work in Histology,	70
Laboratory work in Bacteriology,	120
Original research on some dental disease,	200

In addition to the foregoing, each student must take at least one of the following elective studies:—general pathology, electrotherapeutics, quantitative chemical analysis, physiological chemistry, pharmacognosy, salivary analysis, general biology, dental metallurgy, or must prepare a thesis on the original research of either the first or the second semester.

The time required to complete the course prescribed for the advanced degree depends upon the diligence and capacity of the student, but at least a year's work is required in all cases.

Graduate students are required to pay the same annual fee as undergraduates, and those who have not previously been matriculated in this University are also required to pay the usual matriculation fee. The expenses of the laboratory courses vary according to the character of the work taken.

The degree of Doctor of Dental Science (D. D. Sc.) is conferred upon graduate students who complete the prescribed course as outlined above.

FACILITIES FOR INSTRUCTION.

For general information relating to the University libraries, museums, laboratories, hospitals, and gymnasium, see pages 20 to 32, and 154 to 160.

Among the facilities of special interest to students of dentistry the following may be mentioned.

DENTAL MUSEUM.

The dental museum is supplied with a large number of anatomical, physiological, pathological, and histological preparations, including a series illustrating dentition from infancy to the completion of the process in the adult, and the normal changes through life to old age, and also illustrative of the dental and osseous tissues. Preparations, natural and artificial, greatly facilitate the study of the nervous and vascular systems. The design is to make every practicable appliance in this direction available.

The late Professor Ford contributed his entire collection of crania and odontological specimens to this museum, making it one of the best of its kind in this country. Additions to this collection are desired, and gifts of material illustrating comparative odontology and typical or abnormal human teeth, will be gratefully received.

DENTAL LIBRARY.

A library of dental science, containing almost every known work on this specialty, including an almost complete file of every dental journal published, is shelved in the dental building, where it is accessible to all students. A finely appointed reading room is connected with the library.

LABORATORY OF MECHANICAL DENTISTRY.

This laboratory contains charcoal and coke furnaces, soldering table, rolling mill, and lathes; appliances for the various manipulations of prosthetic dentistry, such as the construction of artificial dentures in gold, continuous gum, silver, aluminum, and other bases; appliances for the regulation of teeth and for the mechanical treatment of oral deformities; and facilities for the manufacture of instruments. The laboratory has accommodations for two hundred students at a time. Particular atten-

tion is given to the manipulation and management of the precious metals with reference to their use for dental purposes.

Each student is furnished a bench containing a drawer and cupboard with lock and key, to contain the instruments that he is obliged to furnish for the prosecution of his work. If a student has any of these instruments it would be well to bring them; but it is more desirable to defer purchasing until the advice of the instructor in the college has been secured, as it is desirable that a complete and uniform outfit should be in the possession of each student. This outfit costs about fifty dollars, and if taken care of will be a permanent investment, as the tools will all be necessary and useful in practice. These tools must be purchased at the beginning of the course, as they are required during the first as well as during the succeeding years.

DENTAL OPERATING ROOMS.

The operating rooms are large, well lighted, heated, and ventilated. The main room contains sixty operating chairs, with an extension bracket and movable table with drawers for instruments for each chair. Other rooms contain chairs and apparatus for the administration of anæsthetics, for the extraction of teeth, and for other purposes. Each student is required to supply himself with a dental engine and a full set of operating instruments; these must be purchased with the advice of the instructor, and will cost about one hundred dollars. Like the laboratory tools, they will be necessary to begin practice, and if carefully used will last many years; consequently care should be exercised in their purchase. They need not be purchased until the third year.

COURSES IN OTHER DEPARTMENTS.

Those who can command the time may also avail themselves of numerous lectures, or pursue elective studies, in the Department of Literature, Science, and the Arts (page 38); or may attend special lectures in the Department of Medicine and Surgery (page 147), such as those on gynecology and the diseases of children, or on other subjects that are important to the practicing dentist.

TEXT-BOOKS AND BOOKS OF REFERENCE.

First Year.—ANATOMY.—Morris; Gray.

GENERAL CHEMISTRY.—Freer; Remsen.

ORGANIC CHEMISTRY.—Perkins-Kipping; Bernthsen.

HISTOLOGY.—Piersol; Schäfer; Klein.

MEDICAL DICTIONARY.—Gould; Thomas.

PROSTHETIC DENTISTRY.—Essig; Richardson.

CROWN AND BRIDGE WORK.—Evans.

- Second Year.**—PHYSIOLOGY.—Howell; Foster; Martin.
 BACTERIOLOGY.—Fränkel; Sternberg; Vaughan and Novy.
 QUALITATIVE CHEMISTRY.—Prescott.
 DENTAL METALLURGY.—Hodgen; Essig.
 DENTAL ANATOMY.—Black; Tomes.
- Third Year.**—GENERAL PATHOLOGY.—Ziegler; Green.
 DENTAL PATHOLOGY.—Bödecker; Wedl; Ingersol.
 ORAL SURGERY.—Warren; Garretson; Tomes.
 OPERATIVE DENTISTRY.—Harris; Taft.
 ORTHODONTIA.—Talbot; Guilford.
 DENTAL MEDICINE.—Gorgas; Wood; Potter.
- REFERENCE BOOKS.—American System of Dentistry; Watts's Chemical Essays; Farrar's Irregularities of the Teeth; Mitchell's Chemistry; Cassidy's Dental Chemistry and Materia Medica; Kingsley's Oral Deformities.

FEES AND EXPENSES.*

Matriculation Fee.—For Michigan students, *ten dollars*; for all others, *twenty-five dollars*.

Annual Fee.—For Michigan students, *thirty-five dollars*; for all others, *forty-five dollars*.

Diploma Fee.—For all alike, *ten dollars*.

Laboratory Expenses.—*Chemical Laboratory.*—Students are required to pay for the materials and apparatus consumed by them. The average expense for the required course is about *ten dollars*. *Histological Laboratory.*—A charge of *seven dollars* is made for material used in this laboratory. *Anatomical Laboratory.*—A charge of *ten dollars* is made for material used in dissecting.

Incidental Expenses.—A charge of *three dollars* a year is made against each student to cover the cost of supplies and equipment provided by the University. The expenses for incidentals, teeth, rubber, and other material needed in the technical courses, but not supplied by the University, are about *fifteen dollars*.

The average total expenses of a student of dentistry, including University fees, board, books, etc., are three hundred dollars, and upward, for the college year of nine months, depending on individual habits and tastes. The cost of instruments and tools, amounting to about one hundred and fifty dollars for the entire course of three years, is not included

*The Matriculation Fee and the Annual Fee must be paid in advance, and no seat will be assigned to a student until after such payment. No portion of the fees can be refunded, except by order of the Board of Regents, to students who leave the University during the academic year.

in the above estimate, for the reason that it is not properly a college expenditure, the tools being available and necessary in future practice.

To avoid embarrassment, new students should come prepared to spend during the first week about \$135, if residents of Michigan, or \$160, if not residents of Michigan, for University fees, books, and tools.

Additional information in regard to expenses may be found on page 36.

Summer School in the Department of Literature, Science, and the Arts.*

A special Announcement of the Summer School, containing further particulars than are here given in regard to the courses of instruction, etc., is published annually. Copies of this Announcement can be had by addressing Mr. James H. Wade, Steward of the University.

THE Summer School is under the general supervision of the Faculty of the Department of Literature, Science, and the Arts, though the details of management are in the hands of a sub-Faculty. The following persons constitute the Executive Committee for the year 1897 :

ELMER A. LYMAN, Instructor in Mathematics (*Chairman*).

ERNST H. MENSEL, Instructor in German (*Secretary*).

FRED M. TAYLOR, Junior Professor of Political Economy and Finance.

JOSEPH H. DRAKE, Assistant Professor of Latin.

KARL E. GUTHE, Instructor in Physics.

The School opens on the first Wednesday after Commencement and continues for six weeks (July 7–August 18, 1897).

GENERAL REGULATIONS.

I. Before beginning work in the school, students are required to register with the chairman of the executive committee at the office of the Dean of the Department of Literature, Science, and the Arts, and to pay their fees to the Treasurer of the University. Laboratory fees, where required, are also to be paid to the Treasurer.

*For the Summer School of Law see page 176.

2. Each full course of study, except when otherwise specified, comprises thirty lessons, one hour each day for five days in the week.
3. The charges for tuition for the session are as follows:

One Course.....	\$15.00
Two Courses taken by the same student.....	25.00
Three Courses taken by the same student.....	30.00

The maximum tuition fee is \$30.00. For laboratory courses the expense varies with the character of the work done and the economy of the student.

4. Credit towards graduation in the Department of Literature, Science, and the Arts, may be given to students regularly enrolled in the Summer School, subject to the following rules and conditions:

(a) No credit is given save for work that is similar in kind to courses that are regularly offered in that Department.

(b) Credit is given only for full courses of five hours a week for the session, or multiples thereof. Exceptions to this rule may be made in the case of laboratory courses.

(c) The credit to be given for a full course of five hours a week is *two hours*,* and for multiple courses in proportion. In some courses credit of *three hours* or *five hours* may be given for proportional time and work.

(d) No student can receive more than *six hours* of credit for work done in any one session of the Summer School, nor more than *twelve hours* in all for work done in the school.

(e) All credits must be reported by the several instructors to the Secretary of the Summer School immediately on the close of the annual session.

COURSES OF INSTRUCTION.

The courses of instruction are arranged to meet the wants of several classes of students. It is supposed that a considerable proportion of the students in attendance will be teachers in high schools or academies who desire to enlarge their preparation for their special work. Students who wish to review studies preparatory to presenting themselves for examination for admission to college or university will find courses directly adapted to meet their wants. Students regularly matriculated in the University will also find courses suited to their needs.

In the description of courses given below, the terms *two hours*, *four hours*, *six hours*, etc., indicate the amount of credit to be given for the course. Where no mention of hours is made it is to be understood that the course is not entitled to credit.

*For explanation of the term Hour of Credit see page 54.

The courses offered for the summer of 1897, with the names of the instructors, are as follows.

GREEK.

MR. MEADER.

1. Preparatory Greek.
2. The Poetics of Aristotle. *Two hours.*

LATIN.

1. Preparatory Latin:
 - (a) Latin Prose. Mr. MEADER.
 - (b) Cicero's Orations against Catiline. Mr. MEADER.
 - (c) Virgil's Aeneid. Assistant Professor DRAKE.
2. Rapid Reading of Selections from Livy, Nepos, and Martial. *Two hours.* Assistant Professor DRAKE.
3. Introduction to Roman Political Institutions. *Two hours.* Assistant Professor DRAKE.
4. Historical Proseminary. *Two hours.* Assistant Professor DRAKE.

FRENCH.

1. Beginners' Course. Grammar and reading. Assistant Professor LEVI.
2. Modern Prose. *Two hours.* Mr. EFFINGER.
3. Classic Drama; Corneille, Racine, Molière. *Two hours.* Mr. EFFINGER.
4. Prose Composition. *Two hours.* Assistant Professor LEVI.
5. Scientific French. *Two hours.* Mr. EFFINGER.
6. History of French Literature. *Two hours.* Mr. EFFINGER.

GERMAN.

DR. MENSEL.

1. Beginners' Course. Grammar and reading of easy narrative prose.
2. Modern Prose, narrative and historical. *Two hours.*
3. Composition. Systematic course in syntax with daily exercises in writing German. *Two hours.*
4. Classic Drama. Representative dramas of Lessing, Goethe, or Schiller, with lectures on the history of German literature of the period. *Two hours.*

ENGLISH AND RHETORIC.

1. English Literature (including Shakespeare). *Two hours.* Professor DEMMON.
2. American Literature. *Two hours.* Professor DEMMON.
3. Anglo-Saxon. *Two hours.* Professor HEMPL.

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4. Historical English Grammar. *Two hours.* Professor HEMPL.
 5. Chaucer. *Two hours.* Professor HEMPL.
 6. Composition. *Two hours.* Mr. STRAUSS.
 7. Principles of Paragraph Writing. *Two hours.* Mr. STRAUSS.

HISTORY.

1. General History, with special reference to mediæval history. *Two hours.* Dr. DIXON.

PHILOSOPHY.

1. Historical Development of Ethical Ideas. *Two hours.* Professor WENLEY.
2. General Psychology. *Two hours.* Mr. REBEC.

POLITICAL ECONOMY.

1. Elements of Political Economy. Text-book and lectures. *Two hours.* Professor F. M. TAYLOR.
2. History of the Development of Industrial Society. *Two hours.* Dr. DIXON.
3. Money and Banking. Text-book and lectures. *Two hours.* Professor F. M. TAYLOR.

MATHEMATICS.

1. Geometry for Admission. Text-book: Beman and Smith's Plane and Solid Geometry. Dr. GLOVER.
2. Algebra for Admission. Text-book: Smith's Elementary Algebra, revised by Stringham. Mr. HALL.
3. Trigonometry and Algebra. Equivalent to Course 1a of the first semester's work (page 79). *Three hours.* Mr. LYMAN.
4. Analytic Geometry. This course together with the algebra of Course 3 above is equivalent to Course 1 of the first semester's work, and *four hours* credit will be given for the two courses taken together. Mr. HALL.
5. Theory of Equations. Text-book: Burnside and Panton's Theory of Equations. *Two hours.* Mr. HALL.
6. Elementary Mechanics. Text-book: Ziwet's Theoretical Mechanics, Parts I and II. *Two hours.* Dr. GLOVER.
7. Projective Geometry. Lectures on the synthetic geometry of the range, point, and conic section. *Two hours.* Dr. GLOVER.
8. Lectures on the Theory of Infinite Series. *Two hours.* Dr. GLOVER.
9. Geometry. Teacher's course. Text-book: Beman and Smith's Plane and Solid Geometry. *Two hours.* Professor BEMAN.
10. Calculus. Text-book: Osborne's Differential and Integral Calculus. *Two hours.* Professor BEMAN.

11. Differential Equations. Text-book: Johnson's Differential Equations. *Two hours.* Professor BEMAN.

PHYSICS.

1. Physics for Admission to the University. Dr. GUTHE.
2. Teacher's Course in General Physics. Lectures and recitations.
Text-book: Carhart and Chute's Physics. Dr. GUTHE.
3. Laboratory Physics designed for teachers. Dr. ST. JOHN.

CHEMISTRY.

Students will be accorded the full privileges of the laboratory each day from 8 to 12 A. M. and from 2 to 5 P. M. The laboratory expenses vary from \$1.00 to \$1.75 a week, proportionately to the time spent, the course chosen, and the economy used.

1. General Inorganic Chemistry. Lectures and recitations. *Three hours.* Mr. HIGLEY.
2. Laboratory Work in General Inorganic Chemistry. *Three, four, five, or six hours,* as arranged with instructor. Mr. LICHTY.
Course 2 must be accompanied by Course 1 or preceded by its equivalent.
3. Qualitative Analysis. Laboratory work and recitations. *Four, five, or six hours,* as arranged with instructor. Mr. TROWBRIDGE.
4. Beginning Quantitative Analysis. Lectures and recitations. *Four or six hours,* as arranged with instructor. Professor E. D. CAMPBELL or Mr. TROWBRIDGE.
5. Inorganic Preparations. Laboratory work. *Three, four, five, or six hours,* as arranged with instructor. Mr. LICHTY.
6. Organic Chemistry. Lectures and recitations. *Two hours.* Mr. TROWBRIDGE.
7. Organic Preparations. *Two to six hours.* Mr. TROWBRIDGE.
8. Methods of Determining Molecular Weights. *Two or three hours.* Mr. LICHTY.
9. Advanced Quantitative Analysis. *Four or six hours.* Professor E. D. CAMPBELL.
10. Organic Analysis. Laboratory work and reference reading. Credit arranged with instructor. Mr. TROWBRIDGE.
11. Laboratory Research in General Chemistry. Hours and credit arranged with instructors. Mr. HIGLEY and Mr. LICHTY.

ZOOLOGY.

MR. JOHNSTON and MISS BUTLER.

1. A study of typical species of animals, with reference to structure, function, development, and relationship. Laboratory work, lectures, and recitations. *Three hours.*

2. The structure and development of a typical vertebrate (the frog)
Two hours.
3. Teachers' Course.

BOTANY.

MR. POLLOCK.

1. Morphology and Physiology of Phanerogams. *Two hours.*
2. Algae and Fungi. *Four hours.*
3. Vegetable Histology. *Two or four hours.*

DRAWING.

MR. WRENTMORE and MR. GOULDING.

1. Mechanical Drawing. *Two hours.*
2. Freehand, Perspective, and Pen and Ink Drawing. *Three hours*
3. Descriptive Geometry. *Three hours.*
4. Shades, Shadows, and Perspective. *Three hours.*
5. Stereotomy. *Two hours.*
6. Lettering and Machine Sketching. *Three hours.*
7. Freehand Lettering. *Two hours.*
8. Architectural and Water Color Drawing. *Two hours.*

ENGINEERING.

MR. WRENTMORE.

1. Elements of Mechanism. *Two or three hours.*
2. Graphical Analysis of Structures. *Two hours.*

BACTERIOLOGY AND PHYSIOLOGICAL CHEMISTRY.

1. Physiological Chemistry. *Six hours.* Mr. BLISS.
2. Bacteriology. *Six hours.* Mr. PERKINS.

HISTOLOGY.

1. Vertebrate Histology. *Three hours.* Assistant Professor HUBER
and Mr. BALDWIN.
2. Histological Technique. *Three hours.* Assistant Professor HUBER

List of Graduates of 1896.*

DEPARTMENT OF LITERATURE, SCIENCE, AND THE ARTS.

BACHELOR OF LETTERS.

Annie Louise Bacorn, ~	Agnes Monica Kenny, -
Bertha Carmelia Barney, -	Annie Sales Kirtland, ~
Harriet Elizabeth Bingham, -	James Ellsworth Kirtland,
Elaine Childs, -	Kirke Lathrop,
Bessie Maud Colby, -	Medor Ewing Louisell,
Frances Clare Cook, -	Charles Albert Manning,
Charles Pugh Davis,	†Walter Gill McCullough,
Gertrude Adelaide Divine, -	Lauretta May O'Meara, -
Sheridan Williams Ehrman,	Nina Howarth Paddock, -
Orleana Amanda Fisher, -	Bessie Chase Peek, ~
Leah Isabel Fowler, ~	Lewis Albert Pratt,
Stuart Eugene Galbraith,	James Hendry Prentiss,
Jessie Bertha Gibbes, -	Katharine Elizabeth Puncheon, ~
Gaylord Wilson Gillis,	Pearl Ernestine Robinson, -
Luman Webster Goodenough,	Fanny May Seaver, -
Theresa Alvina Grube, ~	Charles Everett Skinner,
Walter Charles Haight,	J. Sterling St. John,
Jennie May Harvey, ~	Susan Lavinia Stoner, -
Ione Haydon, ~	Darling Zena Thomson, -
Joanna King Hempsted, ~	James Irving Vincent,
Marion Hunter, ~	Lillie Mae Volland, -
Edith Clemence Jones, -	Bessie May Whitehead, ~
Robert Harvey Whitten.	

45

BACHELOR OF SCIENCE.

(IN BIOLOGY.)

Henry William Charles Bödecker,	Margaretha Elise Catherine Horn, ~
Rufus Ivory Cole,	B.S., <i>Kansas State Agricultural</i>
Edna Daisy Day, ~	<i>College,</i>

*The List of Graduates contains the names of all persons on whom degrees were conferred during the year 1896. A dagger (†) indicates that the degree was conferred at some other time than Commencement.

Fanny Elizabeth Langdon, -	Charlotte Elizabeth Pickett, -	
Charles Chesterfield Nicola,	George Tupper.	8

BACHELOR OF SCIENCE.

(IN CHEMISTRY.)

Samuel Herman Baer,	Benjamin Lindley Murray, Ph.C.,	
Herman Elisha Brown,	Adah Sanders.	4

BACHELOR OF SCIENCE.

(IN GENERAL SCIENCE.)

Robert Sumner Albee,	Allen Frank Rockwell,	
Ada Malvina Cartwright, <	John Hiram Ruckman,	
Carrie Adelaide Hardy, <	George Howe St. Clair,	
William Adams Lewis,	William Warren Taylor,	
Artemas Wilson Riggs,	Louis Carlisle Walker, -	
	Jesse Elon Whitsit.	11

BACHELOR OF PHILOSOPHY.

Mary Joice Adams, -	Edith May Kimball, -	
Kirkland Barker Alexander,	Clare James LeRoy,	
Susie Helen Allen, -	Margaret Katharine McGregor, -	
Mary Luella Batchelder, -	Emma Josephine MacMorran, -	
Howard Bement,	Agnes May Mason, -	
Henry Edward Bodman,	Harriett Elvira McKinstry, -	
†Georgiana Cleis Blunt, -	Lois Azubah McMahon, -	
Mary Frances Camp, -	William Maurice Mertz,	
Archibald Campbell,	Maidie Newton, -	
Charles Knapp Carpenter,	Almerene M. Orsborn, -	
Clarence Day Clark,	Frederick Arthur Osborn,	
Grace Louise Collins, -	Emma Grace Palmerlee, -	
Anna Elizabeth Cool, -	Mary McCreary Peters, -	
Clarence Argyle Coolidge,	Jessie Chesebrough Porter, -	
Nina May Doty, -	Alice Maude Pound, -	
Helen Louise Douglas, <	Joseph Henry Quarles,	
Matilda Louise Fairman, -	Alice Eleonore Rothmann, -	
†Adelbert Howard Finney,	Allen Joshua Seney,	
James Joseph Franc,	Lewis Conrad Sleeper,	
Florence Mabelle Halleck, -	Grace Delafield Sturges, -	
Emily Augustine Harper, -	William Harold Thompson, LL.B.,	
Mathilde Hine, -	Walter Hannibal Thorp,	
Elizabeth Irland, -	Ruth Moorhead Tuttle, -	
Helen Adeline Kelley, <	Horace Hill Van Tuyl,	
Nell Kempf, -	Emma Frances Wald, -	

Agnes Mary Warren, ~	Willis Hamel Wilcox,	
	Katherine D. Wiltsie. ~	53

BACHELOR OF ARTS.

Kate Oretta Arnold, --	Ellen Ann Kennan, -	
John Watson Beach,	Reinhold Knauth,	
Elton Pope Billings,	Eugene LeRowe,	
Stratton Duluth Brooks,	Bessie Barber Larrabee, ~	
Alice Brown, --	James Alfred LeRoy,	
William Gordon Bryant,	Dale Livingstone, ~	
Artena Mary Chapin, -	William Dexter McKenzie,	
Oscar Phipps Cole,	Georgien Emma Mogford, -	
Frederick William Backus Coleman,	Ida Belle Moore, -	
Charles Goldsmith Cook,	Harry Davidson Nutt,	
Maud Irene Cooley, -	Carl Copeland Parsons,	
Amaziah Donald Davis,	Frank Henry Petrie,	
William Bellows Decker,	Frank Prather Sadler,	
Rose Demmon, -	Harry Garr Schock,	
Fay N. Donaldson, A.B., <i>Napa</i>	James Herbert Scott,	
<i>College,</i>	Sadie Eleanore Sheehan, -	
Helen Eliza Dryer, -	†Chilton Rupert Stearns,	
Charles Albert Farnam,	Bessie Bingham Stevens, -	
Jane Estelle Field, ~	Ada Stewart, ~	
Conrad Georg,	Duane Reed Stuart,	
Neil Alexander Gilchrist,	James Wellings Sturgis,	
Carlotta Goldstone, ~	Lizzie Trebilcox, -	
Leslie Grant Hayes,	Alonzo Hubert Tuttle,	
Earle Raymond Hedrick,	Herbert Sebring Voorhees,	
Turner Paul Hickey,	Hadley Horton Walch,	
Edward Morton Holland,	Christian Friedrich Weiser,	
Euretta Amelia Hoyles, -	Francis Henry Wessels,	
Hobart Birney Hoyt,	Lloyd Charles Whitman,	
Ogden Jewell,	†Eva Amelia Wier. -	57

MASTER OF LETTERS.

Peter William Dykema, B.L.,	Charles Henry Gray, B.L.,	
John Edward Lautner, B.L.		3

MASTER OF SCIENCE.

William Eli Davis, B.S., <i>Michigan</i>	Howard White, Jr., B.S., <i>Swarth-</i>	
<i>Agricultural College,</i>	<i>more College,</i>	
Alfred Berthier Olsen, M.D., B.S.,	Eugene Cyrus Woodruff, B.S.	4

MASTER OF PHILOSOPHY.

David Porter Mayhew, Ph.B.,	Mary Etta Trueblood, Ph.B., <i>Earl-</i>
Carlton Raymond Rose, Ph.B.,	<i>ham College,</i>
Katharine Eliza Sumner, Ph.B.,	Royal Brunson Way, Ph.B., <i>Albion</i>
	<i>College.</i>

5

MASTER OF ARTS.

Lawrence Thomas Cole, A.B.,	†Violet De Lille Jayne, A.B.,
S.T.B., <i>General Theo. Sem.,</i>	Frank Addison Manny, A.B.,
Humphrey Snell Gray, A.B., LL.B.,	Walter Thomson Peirce, A.B.,
George Depue Hadzsits, A.B.,	<i>Ohio Wesleyan University,</i>
Walter Monroe Hamilton, A.B.,	Fannie Ellis Sabin, Ph.B.,
Clemma Belle Hayes, A.B.,	Esther Lakin Sanborn, A.B.,
Orrin Edward Tiffany, A.B.	

11

DOCTOR OF PHILOSOPHY.

Ernst Heinrich Mensel, A.M., <i>Carthage College.</i>	1-202
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DEPARTMENT OF ENGINEERING.**BACHELOR OF SCIENCE.**

(IN ELECTRICAL ENGINEERING.)

William Chalmers Borst,	Charles Gilbert Palmer,
William Anderson Caldwell, Jr.,	Lewis Merton Parrott,
Philip Russell Coats,	Walter Robbins,
John Chassell Condon,	Edward James Ryan,
Merritt S. Conner,	Richard Edward Sack,
Fred Richard Cutcheon,	Frank Clement Soper,
Charles William Ellis,	Will Theodore Stebbins,
Sergius Paul Grace,	Adrian Delano Stevenson,
Edward Bishop House,	Franklin Van Vechten Swan,
Thomas Durand McColl,	George Welles Tanner,
George Karr McMullen,	Lavergn Levi Wheeler,
Walter Howard O'Brien,	Grover Henry Woods,
Henry Bailey Otis,	Henry Lumsden Woolfenden.

26

BACHELOR OF SCIENCE.

(IN MECHANICAL ENGINEERING.)

Harry Copley Buell,	Burt Lewis Foster,
William Clayton Coryell,	Dwight May Guillotte,
Fred Albert Eckert,	Edwin Delos Hoyt,
Charles Morton Eddy,	Albert Benjamin Kalmbach,
Jay D. Edmonds,	Guy Thompson Lamont,
John Watson FitzGerald,	Carl Richard Marquardt,

Clyde Shelton Mason,	Warren Hamilton Thompson,	
†Thomas Durand McColl,	†Harry Cabot Weare,	
Herbert Woodruff Merrill,	Victor Roy Willoughby,	
Guy Dorick Newton,	Louis Albert Woodard,	
	Edwin Francis Woodruff.	21

BACHELOR OF SCIENCE.

(IN MINING ENGINEERING.)

George Rollins Snover.	1
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BACHELOR OF SCIENCE.

(IN CIVIL ENGINEERING.)

Mortimer Grant Barnes,	Hugh Braley Kelly,	
Walter John Cahill,	Thomas Bassnett Lee,	
Burnham Standish Colburn,	George Thomas McGee,	
Jesse I. Conklin,	Harry De Yoe Mills,	
Richard Deming Ewing,	Lee Luke Newton,	
Thomas Henry Ferguson, Ph.B.,	Arthur Patrick O'Brien,	
Albert Emerson Greene, Ph.B.,	James Merton Raikes,	
Paul Hamilton,	Ben Cornelius Rich,	
George Herbert Harrington,	Charles Henry Spencer,	
John Seldon Hoadley,	Charles Herbert Vaughan, Ph.B.,	
John William Irwin,	<i>Hillsdale College,</i>	
†Hugh Calvin Jackson,	Frank Scott Whitman,	
†Julius Kahn,	Carl Benezette Williams,	
	Silas Hiram Woodard.	26

MASTER OF SCIENCE.

Abraham Lincoln Borgan, B.S.	1
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MECHANICAL ENGINEER.

John Robins Allen, B.S.,	Ernest Blackman Perry, B.S.	2
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CIVIL ENGINEER.

Robert Lemuel Sackett, B.S.	1-78
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DEPARTMENT OF MEDICINE AND SURGERY.

DOCTOR OF MEDICINE.

Frances Morton Allen, A.B., <i>Univ. of North Dakota,</i>	Frank Swift Bourns, B.S.,
Gardner Jabez Bigelow,	Charles Francis Boyden,
Chester Bradley Bliss,	Joseph Brayshaw, B.S., <i>Pierce City Baptist College,</i>
Allen Lewis Borden,	James Ernest Browne,

Arthur H. Burleson,	Minnora Sprague Marshall,
Gertrude Dart Campbell,	David Porter Mayhew, Ph.B.,
Charles Henry Carlin,	Charles Samuel McIntyre,
George Willis Clarke,	Hiram Beach Morse,
Sarah Ellen Conner,	Saxe Whittier Mowers, A.M., <i>Wabash College</i> ,
David Murray Cowie,	Christian Peter Nelson,
Arthur Victor Doud,	Ethan A. Nevin,
Thomas John Doughty,	Robert Henry Nichols,
Eleanora S. Everhard, B. S., <i>Ripon College</i> , A.M., <i>ibid.</i> ,	Anna Louise Preston,
Gilbert Bird Furness,	Ernest Hinsdale Ryors,
Carrie Lilla Garlock,	Homer Erwin Safford, Ph.B.,
Katherine Eliza Geiger,	Murray Maywood Sears,
George Adam Geist,	Horace Watson Sherwood, B.S.,
Lawrence Chamberlain Grosh,	<i>Fayette Normal Univ.</i> ,
Theodore Charles Guenther,	Meiyii Shie [Mary Stone],
Mary Cornelia Heilesen,	Clark Francis Tuomy,
Frances Hulbert,	James Wallace Van Dusen,
Ida Kahn,	Frederick Thomas Van Urk,
Samuel Michael Knoop, A.B., <i>Indiana University</i> ,	Mary Eloise Walker, A.B.,
Casper K. Lahuis,	Francis Joseph Welsh, LL.B.,
James Joseph LaSalle,	Charles Edward White,
Lucien Gex Locke,	†Jacob Butler White, B.S., <i>Univ. of Nebraska</i> , as of the Class of 1895,
	John Zieg.

52

DEPARTMENT OF LAW.

BACHELOR OF LAWS.

Joseph Marion Adams,	Clarke Edward Baldwin,
Nathan Gilbert Aldrich,	James Stewart Baldwin,
Clay Hayward Alexander,	†Frank Warren Ballenger,
William Brown Anderson,	Robert Meador Barnett,
William Hamilton Anderson, B.S.,	Henry Winslow Barnes,
<i>Blackburn University</i> ,	Oliver Rogers Barrett,
William Tudor Apmadoc,	Octavia Williams Bates, A.B.,
†John Benjamin Archer, A.B., <i>Williams College</i> ,	Charles Grant Beale,
James Dell Armstrong,	Luther Gilbert Beckwith,
John Arnold,	Thomas McCurdy Benner, Jr.,
Charles Wesley Calvin Awrey,	Daniel Nathaniel Bessie,
Frederick Winans Bacorn,	William Stockton Bigger,
	Eugene Beasley Binford.

Elbert Follett Blakely,	Roy J Covert,
Edmond Block, A.B.,	John Coleman Crapser,
Arthur Collier Bloomfield, A.B.,	Orien S. Cross,
John Albert Bloomingston,	Harry Knox Crow,
Philip Blum, Jr.,	John Cobaugh Davies,
Ninian Ulysses Bond, M.S., <i>Geneva</i>	Benjamin Franklin Deahl,
<i>College,</i>	Edwin Denby,
Kenner Seaton Boreman,	Arthur Wilkins DeSelm,
Clarence Leslie Bradley,	Courtney W. Dice,
James Congdell Fargo Bradley,	David Leo Dillon,
Charles LeMont Brooks,	William Paul Distler,
John Birt Brooks, A.B.,	William Frederick Dodsley,
Charles Herman Brower,	Harry Doerr,
J. Earle Brown,	Clarence Vincent Donovan,
Ernest Labon Bullen,	Walter Wendell Drew, A.B.,
Franklin Elisha Bump,	Albert Eusebius Dunning,
Thomas Jefferson Butler,	Halbert Myron Eggleston,
Leo Martin Butzel, Ph.B.,	Lewis Benjamin Ely,
William Charles Cadwallader, B.S.,	Harry Oliver Evans, A.B.,
<i>Olivet College,</i>	Fred Ross Everett,
Luther Eugene Campbell, Jr.,	David Shelby Ewing,
Fred Littleton Canine,	Albert John Farrah,
Claude Silas Carney,	Edward Stewart Ferry.
Charles Edwin Carter,	Norman Flowers,
William Carveth,	Reuben Ayres Fogg,
Charles Rowland Cary,	Charles Woodworth Foster, B.L.,
William Rock Chambers, B.L.,	Frank Davis Fox,
<i>Univ. of Illinois,</i>	Chester Fritshaw,
Martin Samuel Chandler,	†Ephraim Frost,
George Albert Chapman,	Benjamin Andrew Gage,
Hugh Crawford Chedester,	Fred Howard Gaston,
Dwight Bissell Cheever, B.S.,	Frank Gilman Gilland,
Dell Walton Clark,	David Moore Glascock,
†George Halbash Clementson,	Clayton Spencer Goodwin,
Harry Burnham Coffield,	Joseph Henry Gosnell,
Charles Albert Compton, A.B.,	Jesse Howard Green,
<i>Central Normal College,</i>	Charles A. Gridley,
Henry Arnold Conlin,	Warren W. Guthrie, Jr., A.B., <i>Yale</i>
Henry William Conner,	<i>University,</i>
Michael Francis Conry,	Edward George Hackney,
Clayton Thurston Cook,	Ralph D. Haley,
Wirt Arthur Cook,	Edgar Louis Hall,
Edwin Scott Coombs,	Forrest Maynard Hall,

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|---|---|
| Roy Faris Hall, | †George Patterson Kelly, |
| Laurence Rankin Hamblen, | Will Henry Kelly, |
| Arthur Killiam Hardy, B.S., <i>Knox</i> | James Daniel Kennedy, |
| College, | Nathaniel Hall Kennedy, |
| Francis A. Harper, | William Wallace Kerr, |
| Edmund Rice Harrington, | Louis Klingel, B.L., <i>University of</i> |
| John Truesdale Harrington, A.B., | <i>Illinois,</i> |
| <i>Oberlin College,</i> | Bradford Knapp, B.S., <i>Vanderbilt</i> |
| Artemas Everett Harris, B.S., <i>Napa</i> | <i>University,</i> |
| <i>College,</i> | Hans Adolf Kroeger, |
| Lawrence Thomas Harris, A.B., | Francis Asbury Kulp, |
| <i>University of Oregon,</i> | William Lachner, |
| John Wilson Hart, | Raymond Arthur Latting, |
| Berton Eugene Hathaway, B.S., | Swaby Latham Lawton, |
| <i>Hiram College,</i> | Isadore Levy, |
| Harry Gurley Hay, | Bertrand Francis Lichtenberger, |
| John Longworth Heffernan, | Erasmus Christopher Lindley, B.L., |
| Franklin Carlisle Hodkinson, | Charles Elihu Longwell, |
| John Willis Hollister, A.B., <i>Wil-</i> | Jacob Lingard Lorie, B.L., |
| <i>liams College,</i> | John Loughnane, |
| Franklyn Hiram Holzheimer, | Medor Ewing Louisell, |
| Alvah Stanton Hopkins, | Adelbert Alonzo Luckey, |
| Harry Theodore Huber, | Charles Patrick Lund, |
| Harry Milton Huff, | Henry Laurence Lyster, A.B., |
| Daniel Reese Hughes, | George Herbert Lytle, |
| James Torrence Hughes, | Clark Anderson Mabon, A.B., <i>Na-</i> |
| Kent Worley Hughes, | <i>tional Normal University,</i> |
| Frederick Dominick Hunker, A.M., | Allan Campbell MacDonald, Ph.B., |
| <i>St. Francis College,</i> | Ray George MacDonald, Ph.B., |
| Alfred Hatch Hunt, A.B., | <i>Albion College,</i> |
| Albert August Huseman, | Thomas Joseph Mahon, A.B., <i>De-</i> |
| Robert Erskine Hutchison, | <i>troit College,</i> |
| Fred Lewis Ingraham, | Henry John Malone, |
| Howard Alfred Jackson, | William Charles Manchester, |
| Logan Forrest Jackson, | Robert Woolf Manly, |
| Albert Hutchinson Jarman, | William Mannhardt, |
| John Franklin Jewell, | Herbert Rogers Marlatt, |
| Lynn Myrton Johnston, A.B., | George Arthur Marston, |
| Clarence Allen Jones, | Abner Jackson LeClaire Martin, |
| Joseph Dan Jones, | Ph.B., <i>Cornell College,</i> |
| Philemon Swinehart Karshner, | Walter Park Martindale, Ph.B., |
| Clarence Clay Kelly, | Quintin Amador Martinez, |
| George Hamilton Kelly, | Charles Hamilton McBride, B.L., |

<i>Olivet College,</i>	Fletcher Asbury Payne,
George Washington McCaskrin,	Harry A. Pence,
Harrison Madison McCaskrin, B.S.,	Albert Hough Perkins,
<i>University of Illinois,</i>	Stuart Hoffman Perry, A.B.,
Allan Charles McCaughan,	William Smith Pierson,
Charles Everett McConkey,	Harry Anderson Pratt,
William McCormick,	Orville Wilbur Prescott,
John James McDougall,	William Pringle,
Charles Lincoln McGuire,	David Irving Prugh,
Ormsby McHarg,	Frank Randolph, M.D.,
James Oliver McIlwain,	Clifford H. Rauch,
John Alfred McKeown,	Leonard LeRoy Redick,
John McUlvan,	Thomas Benton Reeder,
Arthur Augustus Meeker,	Earl Dewey Reynolds, Ph.B.,
Glenn Hanford Meeker,	<i>Hillsdale College,</i>
Edward Menkin,	Alfred Rice,
George Edward Meredith,	Ira Wells Riford,
Albert Edward Meyer,	Arthur William Rinehart,
Arthur Miller,	Herbert Norman Rose,
George Riley Miller, Jr.,	John Albert Rosen,
Stephen Ivere Miller, Jr.,	Menz Israel Rosenbaum, Ph.B.,
Rolfe Archibald Mills,	Lewis Eldoras Royal,
Donald Ellis Minor, B.S., <i>Northern</i>	William Benjamin Rubin, B.L.,
<i>Indiana Normal University,</i>	Pierce Howard Ryan,
John Robert Moore,	Elmer Guy Ryker,
Earle Victor Mudge,	Leland Howard Sabin,
William Bruce Murdoch,	Harry Young Saint, A.B., <i>Ohio</i>
James Orin Murfin, B.L.,	<i>Wesleyan University,</i>
Victor Alphonso George Murrell,	George Leon Sanders,
Miron Williams Neal, A.B.,	J. Casper Sauer,
Elmer James Neville,	Thomas Francis Savage,
Harry Glover Nicol,	Benjamin Newton Savidge,
Donald Fraser Noble,	Thomas Anton Scherer,
Erasmus Lee Norris,	Charles John Schuck,
Henry Edward Nothomb, B. S.,	John Hamilton Scott,
<i>Iowa State Normal School,</i>	Edward Milton Selby,
Bert Edward Nussbaum,	Angus Roy Shannon,
Herbert King Oakes,	George Elmer Sharp,
George Timothy O'Farrell,	Howard Melvin Sharp,
Roger Stanley Olbinski,	Lowie Lucas Shelton,
Edgar Paul O'Leary,	Edmund Claude Shields, B.L.,
Mark Preston Olney,	Ernest Russell Shoecraft,
Charles Marvin O'Neill,	Alfred Lee Short,

Joseph Hudson Short,	Charles Samuel Turnbaugh,
William Henry Simons,	Arthur Van Duren, A.B., <i>Hope</i>
James Robert Skillman,	<i>College,</i>
James Leonard Smalley,	William Otto Van Eyck, A.B., <i>Hope</i>
Crapo Corneil Smith, A.B., <i>Har-</i>	<i>College,</i>
<i>vard University,</i>	Charles J. Vert,
Newton Jasper Smith, Jr., B.S., <i>Na-</i>	Giovanni Raphael Frank Villa, B.L.,
<i>tional Normal University,</i>	<i>Whitman College,</i>
Spurgeon Reece Smith,	William Henry Vodrey, A.B., <i>Beth-</i>
Ernest Albert Snow,	<i>any College,</i>
Oliver Lyman Spaulding, Jr., A.B.,	George Hiram Voorhees,
Edward Everett Spear,	Charles Matthews Waidelich,
William Ambrose Spill,	Harry Hugh Wait,
Harry Guy Stalder, Ph.B., <i>Ohio</i>	Hadley Horton Walch,
<i>University,</i>	Henry Milton Wallace,
†Weed Thorington Starkweather,	James Paddock Wason,
Carl Henry Stein,	James Clyde Watt,
John Harris Stephens,	James Joseph Weadock,
Louis Edson Stewart,	James Augustine Welsh,
Charles William Stratton, Ph.B.,	Robert Horner Welsh,
Cady Richard Stranahan,	Benjamin Franklin Welty, B.S.,
Heber Truman Strong,	<i>Ohio Normal University,</i>
Myron Richard Sturtevant,	Henry Hermann Wende,
Bradshaw Hall Swales,	Ralph Horace Wilkin,
Harvey Stowe Taft,	Daniel Roderick Williams,
Ganson Taggart,	Guy Voorhees Williams,
Richard Lee Taneyhill,	Kenneth Dunham Williams,
Paoli Abram Tarr,	Olney Scott Williams,
Charles Alexander Taylor,	Edward Wilson,
Thomas Dudley Taylor,	Guy Merrill Wilson,
Edwin Tewilliger, Jr.,	Charles Henry Winkenwerder,
Wade Warren Thayer, A.B.,	Forest Wood,
Charles Donald Thompson,	Fredric Abell Wood,
Ernest Laurie Thompson,	David Burnham Woodworth,
†Osmond Holmes Tower,	Gilliam Clark Yoes,
J. Orra Traber,	Jesse Grant Yont,
Irwin Joseph Truman, B.S., <i>High-</i>	John Joseph Zimmer, A.B., <i>Detroit</i>
<i>land Park College,</i>	<i>College.</i>

MASTER OF LAWS.

Frank Warren Ballenger, LL.B.,	Charles Erehart Chadman, LL.B.,
Joseph Edward Bland, LL.B.,	Daniel Abraham Edwards, LL.B.,
Charles David Cary, LL.B.,	John Wilber Gillespie, LL.B.,

Louis Heaton, LL.B.,	William Hanson Murray, LL.B.,
Charles Belknap, LL.B.,	James Joseph Noon, LL.B.,
Omar Eugene Hennighan, LL.B.,	James Howard Schriver, LL.B.,
	<i>Ohio Normal University,</i>
John Lyman Jones, LL.B.,	Charles McDonald Showalter, LL.B.,
Otto Kaspar, LL.B.,	Robert Thompson, LL.B., <i>Ohio</i>
Torazo Kikuchi, LL.B.,	<i>Normal University,</i>
James Henry Mays, LL.B.,	James Edward Wert, B.S., <i>Ohio</i>
Virgil Howard Mowls, LL.B.,	<i>Normal University, LL.B., ibid.</i>
<i>Normal University,</i>	

20-344

SCHOOL OF PHARMACY.

PHARMACEUTICAL CHEMIST.

James Willard Ames,	Harry Theophilus Smith,
Clarence Henry Baum,	Roland Bert Taber,
John Wesley Derry,	Henry Wright Taylor, B.S., <i>Earl-</i>
Oscar Conrad Diehl, Ph.G., <i>Buffalo</i>	<i>ham College,</i>
<i>Coll. of Phar.,</i>	Miles Lucius Trowbridge,
George Millard Heath,	Milton Lyman Trowbridge,
Frank Carleton Hitchcock,	Charles August Fred von Walthau-
Charles Ralph Horton,	sen,
Charles Willis Johnson,	Clarence Albert Weaver,
Robert James Nisbet,	George Purdy Wilder,
Edwin James Fuller Ostrander,	Elisha Bird Williams,
Isidore Sanders,	Frank Howard Wilson,
Edward Louis Schmitt,	Edward Chancey Worden.

23

HOMŒOPATHIC MEDICAL COLLEGE.

DOCTOR OF MEDICINE.

Sumner George Bush,	Fred Alvord Miner,
Frederic Charles Gilcher,	Charles William Ryan,
William Franklin Holmes,	John Frank Titus.

6

COLLEGE OF DENTAL SURGERY.

DOCTOR OF DENTAL SURGERY.

Elmer Harry Argetsinger,	Frank Miller Bacon,
Frank Charles Arnold,	Clarence Harvey Bailey,
Jay Cyrus Arnold,	John Wesley Bass,

Eddie W. Brown,	Howard Joseph Livingston,
Edward Dancy Brown,	James White Lyons,
Robert Reynolds Buckthorpe,	Thomas Steven Mann,
Harry Sizer Buell,	Samuel Stephen Mummery,
George Franklin Burke,	James Henry O'Toole,
Willis Hezekiah Buttolph,	Charles Augustus Phillips,
Jessie Estelle Castle,	Ross Porter,
James Nelson Clarke,	Frank Glenn Powers,
Charles William Cleaver,	Herman Prinz,
Jonathan Peter Collett, B.S., <i>National Normal Univ.</i> ,	Charles Alfred Quackenbush,
Irving William Copeland,	James Robins,
†George Leonard David,	William Howard Roper,
Ernest Frank Day,	Thomas Francis Sheridan,
Edwin Victor Deans,	Charles Levant Sherwood,
Charles Alphonso Devlin,	Charles Eyster Slagle,
Stanford James Farnum,	Albert Lyman Smith,
Stanley Ammon Farnum,	William Joseph Stapish,
Charles Frederick Fitch,	Morley Punchun Templar,
Fred Anson Graham,	Wilber Townsend,
Fred Joseph Hale,	Albertus VanArk,
Hector Hillman,	Charles Alfred Wehe,
Cleveland Artley Houghton,	Ralph Levant Williams,
Burton Truman Hunt,	Raymond Lester Williams,
Charles Lee Kemery,	†William Parker Winning,
Vernor Jay Lathrop,	Robert Millard Woodin,
John Adolph Lentz, LL.B.,	George Herbert Wooton,
	John Alexander Wooton,
	Percy Bennett Wright.

60

HONORARY DEGREES.

BACHELOR OF SCIENCE IN PHARMACY.

LUCIUS ELMER SAYRE,
Dean of the College of Pharmacy in the University of Kansas.

MASTER OF ARTS.

ANDREW CUNNINGHAM McLAUGHLIN,
Professor in the University.

I

DOCTOR OF LAWS.

BENTON HANCHETT,
Attorney at Law.

EDWARD LAURENS MARK,
Professor in Harvard University; Graduate of this University in the
Class of 1871.

ALBERT BENJAMIN PRESCOTT.
Director of the Chemical Laboratory, and Dean of the School of
Pharmacy.

WILLIAM EMORY QUINBY,
Envoy Extraordinary and Minister Plenipotentiary to the Netherlands;
Graduate of the University in the Class of 1858. 4-6

Total Number of Degrees conferred, 771.

FACULTIES AND STUDENTS.*

Department of Literature, Science, and the Arts.

FACULTY.

JAMES B. ANGELL, LL.D., *President*.
ALBERT B. PRESCOTT, M.D., LL.D.
REV. MARTIN L. D'OOGHE, LL.D., *Dean*.
WILLIAM H. PETTEE, A.M.
EDWARD L. WALTER, Ph.D.
ISAAC N. DEMMON, LL.D.
ALBERT H. PATTENGILL, A.M.
WOOSTER W. BEMAN, A.M.
VICTOR C. VAUGHAN, Ph.D., M.D.
THOMAS M. COOLEY, LL.D.
CHARLES S. DENISON, M.S., C.E.
HENRY S. CARHART, LL.D.
RAYMOND C. DAVIS, A.M.
VOLNEY M. SPALDING, Ph.D.
HENRY C. ADAMS, Ph.D.
BURKE A. HINSDALE, LL.D.
RICHARD HUDSON, A.M.
ALBERT A. STANLEY, A.M.
FRANCIS W. KELSEY, Ph.D.
OTIS C. JOHNSON, Ph.C., A.M.
PAUL C. FREER, Ph.D., M.D.
ANDREW C. McLAUGHLIN, A.M., LL.B.
ASAPH HALL, Jr., Ph.D.
ISRAEL C. RUSSELL, C.E., LL.D.

* A dagger (†) preceding a student's name indicates that he pursues studies, for the whole or a part of the year, in more than one department of the University.

WARREN P. LOMBARD, A.B., M.D.
JACOB E. REIGHARD, Ph.B.
THOMAS C. TRUEBLOOD, A.M.
JAMES A. CRAIG, Ph.D.
JOHN C. ROLFE, Ph.D.
ROBERT M. WENLEY, Sc.D., D.Phil.
ELIZA M. MOSHER, M.D., *Women's Dean*.
FREDERICK G. NOVY, Sc.D., M.D.
GEORGE HEMPL, Ph.D.
EDWARD D. CAMPBELL, B.S.
FRED M. TAYLOR, Ph.D.
JAMES B. FITZGERALD, M.D.
FRED N. SCOTT, Ph.D.
ALEXANDER ZIWET, C.E.
GEORGE A. HENCH, Ph.D.
PAUL R. DE PONT, A.B., B.S., *Registrar*.
JOSEPH H. DRAKE, A.B.
GEORGE W. PATTERSON, Jr., A.M., S.B.
G. CARL HUBER, M.D.
JOHN O. REED, Ph.M.
DEAN C. WORCESTER, A.B.
FREDERICK C. NEWCOMBE, B.S., Ph.D.
ALFRED H. LLOYD, Ph.D.
JOSEPH L. MARKLEY, Ph.D.
MAX WINKLER, Ph.D.
MORITZ LEVI, A.B.
EMORY B. LEASE, Ph.D.
ELMER A. LYMAN, A.B.
GEORGE O. HIGLEY, M.S.
JONATHAN A. C. HILDNER, A.M.
DAVID M. LICHTY, M.S.
JOHN R. EFFINGER, Jr., Ph.M.
ERNST H. MENSEL, Ph.D.
ÉARLE W. DOW, A.B.
KARL E. GUTHE, Ph.D.
TOBIAS DIEKHOFF, A.B.
CLARENCE L. MEADER, A.B.
ARTHUR G. HALL, B.S.
WILLIAM D. JOHNSTON, A.M.
GEORGE REBEC, Ph.B.
FRANK R. LILLIE, Ph.D.
CHARLES H. COOLEY, Ph.D.
WILLIAM H. WAIT, Ph.D.

JAMES W. GLOVER, PH.D.
 LOUIS A. STRAUSS, PH.M.
 EDWIN C. GODDARD, PH.B.
 HENRY L. COAR, A.M.
 VICTOR E. FRANCOIS,
 PERRY F. TROWBRIDGE, PH.B.
 PENOYER L. SHERMAN, PH.D.
 DAVID L. DAVOLL, PH.C.
 ARTHUR LACHMAN, B.S., PH.D.
 CHARLES E. ST JOHN, PH.D.
 OTTO E. LESSING, A.B.
 FRANK H. DIXON, PH.D.
 CHARLES A. RABETHGE, M.D.
 SIDNEY D. TOWNLEY, M.S.

Other Instructors and Assistants.

ALICE L. HUNT.
 JOHN B. JOHNSTON, PH.B.
 CHARLES H. GRAY, M.L.
 JAMES B. POLLOCK, M.S.
 GERTRUDE BUCK, M.S.
 FANNY E. LANGDON, B.S.
 ALBERT W. DORR, A.B.
 JESSE E. WHITSIT, B.S.
 ANNIE M. LUTZ, M.S.
 HERMAN E. BROWN, B.S.
 SAMUEL A. JEFFERS, A.B.
 GALEN G. CROZIER, B.S.
 ARCHIBALD CAMPBELL, PH.B.
 DUANE R. STUART, A.B.

STUDENTS.*

HOLDERS OF FELLOWSHIPS.

NAME.	RESIDENCE.
William Dexter McKenzie, A.B., 1896, <i>Holder of the Bennett Fellowship in Classics,</i> Latin; Greek; Roman Political Antiquities.	<i>Ann Arbor.</i>
Mary Gilmore Williams, A.B., 1895, <i>Holder of the Elisha Jones Classical Fellowship,</i> Latin; Greek; Political Antiquities.	<i>Corning, N. Y.</i>

* The principal subjects of study pursued by candidates for an advanced degree are indicated under their respective names; the subject first named being the major study.

**CANDIDATES FOR AN ADVANCED DEGREE AND OTHER
RESIDENT GRADUATES.**

NAME.	RESIDENCE.
Charles Wallace Adams, A.B., 1894, Political Economy; American History; Constitutional Law.	<i>Ann Arbor.</i>
Mary Joice Adams, Ph.B., 1896, American History; English History; Latin.	<i>Normal, Ill.</i>
Jennie Claire Anderson, Ph.B., <i>Oberlin College</i> , 1894, Latin; Roman Political Antiquities; Pedagogy.	<i>Oberlin, O.</i>
Annie Louise Bacorn, B.L., 1896. Rhetoric; English Literature; Philosophy.	<i>Ann Arbor.</i>
Mary Bartol, A.B., <i>Bucknell University</i> , 1894, A.M. <i>ibid.</i> , 1895, Greek; Italian; French.	<i>Lewisburg, Pa.</i>
James Pyper Bird, A.B., 1893, Latin; German; Greek.	<i>Ann Arbor.</i>
Georgiana Cleis Blunt, Ph.B., 1896, American Literature; French Literature; History of Philosophy.	<i>Ann Arbor.</i>
Boyd Bode, A.B., <i>Penn College</i> , 1896, German; Ethics; Modern Philosophy.	<i>Leighton, Ia.</i>
Ella Bourne, Ph.B., <i>DePauw University</i> , 1893, Latin; German; Roman Political Antiquities.	<i>Ann Arbor.</i>
Clifton Henry Briggs, B.S., <i>Mich. Agr. Coll.</i> , 1896, <i>Lacey</i> . General Chemistry; Physics; Analytical Chemistry.	
Alice Brown, A.B., 1896, American History; Constitutional Law; Political Economy.	<i>Ann Arbor.</i>
Gertrude Buck, B.S., 1894, M.S., 1896, Rhetoric; English Literature; Psychology.	<i>Kalamazoo.</i>
Archibald Campbell, Ph.B., 1896, Organic Chemistry; Analytical Chemistry; Geology.	<i>Manhattan, Ill.</i>
Elizabeth Alma Campbell, Ph.B., 1891, Æsthetics; German; French.	<i>Ann Arbor.</i>
Spencer Peter Carmichael, Ph.B., <i>Lafayette Col- lege</i> , 1893, Physics; Mathematics; Chemistry.	<i>LeRoy, N. Y.</i>
Emma Jane Chesney, A. B., <i>Kalamazoo College</i> , 1892, Latin; Roman Political Antiquities; English Literature.	<i>Midland.</i>
Eda May Clark, B.L., 1891, Analytical Chemistry; French; Physics	<i>Ann Arbor.</i>
Bessie Maud Colby, B.L., 1896, Political Economy; European History; Spanish.	<i>Adamsville.</i>

- Charles Henry Cole, A.B., 1882, *Ackley, Ia.*
Pedagogy; History of Philosophy; English Literature.
- Samuel Richard Cook, B.S., 1895, *Ann Arbor.*
General Chemistry; Physics; Astronomy.
- Thomas Benton Cooley, A.B., 1891, M.D., 1895, *Ann Arbor.*
Physiological Chemistry; General Chemistry; Bacteriology.
- Carl Herbert Cooper, A.B., *Upper Iowa Univ.*,
1895, *Quasqueton, Ia.*
Political Economy; History; Sociology.
- Edna Daisy Day, B.S., 1896, *Ann Arbor.*
Hygiene; Embryology; Botany.
- William Bellows Decker, A.B., 1896, *Battle Creek.*
Bacteriology; Physiology; Hygiene.
- Nina May Doty, Ph.B., 1896, *Ann Arbor.*
German; English Literature; French.
- John Robert Effinger, Jr., Ph.B., 1891; Ph.M.,
1894, *Ann Arbor.*
French Literature; Italian Literature; History.
- Charles Edward Everett, B.L., 1889, *Lansing.*
Botany; Vegetable Physiology; Organic Chemistry.
- Charles Albert Farnam, A.B., 1896, *Sand Lake.*
Latin; Greek; Roman Political Antiquities.
- Oliver D. Frederick, B.S., *West Chester Normal*
School, 1895, *North Wales, Pa.*
Mathematics; Physics; Pedagogy.
- Neil Alexander Gilchrist, A.B., 1896, *Ishpeming.*
Hebrew; Philosophy; Ethics.
- Frederic Samuel Goodrich, A.B., *Wesleyan Uni-*
versity, 1890, *Albion.*
Greek, Hellenistic Greek, Archæology.
- Charles Henry Gray, B.L., 1895, M.L., 1896, *Ann Arbor.*
English Literature; Rhetoric; Pedagogy.
- Albert Emerson Greene, Ph.B., 1895, B.S., 1896, *Ann Arbor.*
- George Depue Hadzsits, A.B., 1895, A.M., 1896, *Detroit.*
Greek; Latin; Greek Antiquities.
- Arthur Graham Hall, B.S., 1887, *Ann Arbor.*
Physics; Mechanics; Heat.
- Samuel Allen Jeffers, A.B., *Central Wesleyan*
College, 1892, *New Florence, Mo.*
Latin; Greek; Pedagogy.
- John Black Johnston, Ph.B., 1893, *Ann Arbor.*
Animal Morphology; Physiological Psychology; Physiology.
- Ellen Ann Kennan, A. B., 1896, *Ann Arbor.*
Greek; Latin; Roman Political Antiquities.

- Frank Pattengill Knowlton, A.B., *Hamilton Coll.*,
1896, *Holland Patent, N. Y.*
Physiology; Experimental Morphology; Physiological Chemistry.
- Riotaro Kodama, *Doshisha College*,
Political Economy; Finance; History. *Wakayama, Japan.*
- Fanny Elizabeth Langdon, B.S., 1896, *Plymouth, N. H.*
Botany; Invertebrate Morphology; Experimental Embryology.
- William Adams Lewis, B.S., 1896, *Rockford, Ill.*
American History; Pedagogy; English Literature.
- Almira Lovell, A.B., 1884, *Flint.*
Latin; Greek; Classical Archæology.
- Verdie Jane Baker McKee, B.L., 1893, *Auburn, Ala.*
American Literature; Rhetoric; Pedagogy.
- Harriett Elvira McKinstry, Ph.B., 1896, *Cleveland, O.*
Latin; Classical Archæology; Roman Political Antiquities.
- Lois Azubah McMahon, Ph.B., 1896, *Ann Arbor.*
English Literature; English History; Political Economy.
- Aura Maud Miller, B.L., 1890, *Ann Arbor.*
English Literature; English Language; Pedagogy.
- Paul Ingold Murrill, B.S., *Kentucky State Coll.*,
1895, M.S., *ibid.*, 1896, *Detroit.*
- Frank Wesley Nagler, B.S., 1892, *Ann Arbor.*
Physiology; Organic Chemistry; Analytical Chemistry.
- Walter Hammond Nichols, B.S., 1891, *Ann Arbor.*
Political Economy; Sociology; History.
- Cecile Nielsen, B.L., *Olivet College*, 1893, *Pentwater.*
Latin; German; Roman Political Antiquities.
- Marna Ruth Osband, A.B., 1895, *Ypsilanti.*
- Erastus Devillo Palmer, A.B., *Hillsdale Coll.*,
1889, *Clare.*
English Literature; European History; Pedagogy.
- Jessie Phelps, B.S., 1894, *Pontiac.*
- James Barkley Pollock, B.S., *University of Wis-*
consin, 1893, M.S., *ibid.*, 1896, *Orangeville, Ill.*
Botany; Experimental Vegetable Physiology; Organic Chemistry.
- George Rebec, Ph.B., 1891, *Ann Arbor.*
Ancient Philosophy; Logic; Rhetoric.
- Bessie Bingham Stevens, A.B., 1896, *Ann Arbor.*
Latin; Greek; Classical Archæology.
- Susan Lavinia Stoner, B.L., 1896, *Ann Arbor.*
European History; American History; History of Philosophy.
- Duane Reed Stuart, A.B., 1896, *Detroit.*
- James Wellings Sturgis, A.B., 1896, *Detroit.*
Latin; Roman Political Antiquities; Greek.

242 *Department of Literature, Science, and the Arts.*

Gertrude Sunderland, A.B., 1895,	<i>Ann Arbor.</i>
Louise Bradford Swift, A.B., <i>Wellesley Coll.</i> , 1890,	<i>Detroit.</i>
Latin; Greek; Roman Political Antiquities.	
Ira Dudley Travis, Ph.B., <i>Albion College</i> , 1889,	
Ph.M., 1894,	<i>Ann Arbor.</i>
American History; Political Economy; European History.	
Lizzie Trebilcox, A.B., 1896,	<i>Ypsilanti.</i>
John Walter Verdier, Ph.B., 1895,	<i>Grand Rapids.</i>
Bacteriology; Hygiene; Physiology.	
Lillie Mae Volland, B.L., 1896,	<i>Ann Arbor.</i>
American History; English Literature; Pedagogy.	
Herbert Sebring Voorhees, A.B., 1896,	<i>White Lake.</i>
Latin; Pedagogy; American Literature.	
Ellis David Walker, B.S., 1893,	<i>Ann Arbor.</i>
Pedagogy; Ethics; Sociology.	
Hugh Elmer Ward, B.S., <i>Mich. Agr. Coll.</i> , 1895,	<i>Ada.</i>
Bacteriology; Physiology; Organic Chemistry.	
Arletta Leora Warren, Ph.B., <i>Univ. of Wooster</i> ,	
1889,	<i>Wooster, O.</i>
Latin; Roman Political Antiquities; Greek.	
Katherine D. Wiltsie, Ph.B., 1896,	<i>Detroit.</i>
United States History; German; Pedagogy.	
Elbert Wood, A.B., <i>Olivet College</i> , 1888,	<i>Ann Arbor.</i>
English Literature; Old English; Pedagogy.	
Herbert Blowers Woodward, Ph.B., <i>Hillsdale</i>	
<i>College</i> , 1891,	<i>Hillsdale.</i>
Clarence George Wrentmore, B.S., 1893,	<i>Ann Arbor.</i>
Mathematics; Mechanics; Projective Geometry.	

The following students, enrolled in other departments, are also candidates for an advanced degree in the Department of Literature, Science, and the Arts. See page 116.

ENROLLED IN THE DEPARTMENT OF MEDICINE AND SURGERY.

NAME.	RESIDENCE.
Conrad Georg, A.B., 1896,	<i>Ann Arbor.</i>
Physiological Chemistry; Histology; Physiology.	
Anna Willard Locke, A.B., <i>Wellesley College</i> , 1892,	<i>Nashua, N. H.</i>
Bacteriology; Physiological Chemistry; Histology.	

ENROLLED IN THE DEPARTMENT OF LAW.

NAME.	RESIDENCE.
Arnold Lyman Davis, A.B., <i>University of South</i>	
<i>Dakota</i> , 1895,	<i>Watertown, S. Dak.</i>
Sociology; Political Economy; International Law.	

- Walter Charles Haight, B.L., 1896, *Sycamore, Ill.*
American History; Political Economy; European History.
- Craig Carlton Miller, A.B., *Williams College*, 1895, *Marshall.*
English Literature; American Literature; American History.

CANDIDATES FOR A MASTER'S DEGREE, STUDYING IN ABSENTIA.

NAME.	RESIDENCE.
Louis Begemann, B.S., 1889, Sound and Light; Pedagogy; Electricity.	<i>Fairfield, Ia.</i>
Allen Lysander Colton, Ph.B., 1889, A.B., 1890, Astronomical Photography; Optics; Practical Astronomy.	<i>Mount Hamilton, Cal.</i>
Bernard Benjamin Selling, Ph.B., 1894, LL.B., 1895, Constitutional Law; International Law; English Literature.	<i>Detroit.</i>
Lillie Maria Shaw, A.B., 1884, Greek; German; Botany.	<i>Saginaw, East Side.</i>
Lura Wallace Tozer, Ph.B., 1885, American Literature; German; French	<i>Detroit.</i>

UNDERGRADUATES.*

NAME.	DEGREE.	CREDIT.	RESIDENCE.
Mary Ella Abbey,	A.B.	59	<i>Lowell.</i>
Florence Lavinia Abbott,	Ph.B.	51	<i>Ann Arbor.</i>
Ada Maria Adams,	A.B.		<i>Ann Arbor.</i>
Cuthbert Clarke Adams,	Ph.B.	40	<i>Kenilworth, Ill.</i>
Mary Belle Adams,	A.B.		<i>Ann Arbor.</i>
Romanzo Colfax Adams,	Ph.B.	105	<i>Bloomington, Wis.</i>
Raymond B. Albertson,			<i>Washington, Ia.</i>
Guy Henry Albright,	Ph.B.	30	<i>Tyndall, S. Dak.</i>
Lewis Burton Alger,	Ph.B.		<i>Saint Joseph.</i>
John Smiley Allam,			<i>Detroit.</i>
Cora Maude Allen,	Ph.B.		<i>Pittsfield.</i>
George Henry Allen,	A.B.	64	<i>Grand Rapids.</i>
James Albert Allen,	A.B.	5	<i>Saginaw, West Side.</i>
Margia Allen,			<i>Little Rock, Ark.</i>
Grace Edith Alley,	Ph.B.		<i>Dexter.</i>
Bayard Hoyt Ames,	A.B.	106	<i>Highlands, Col.</i>

* The abbreviations in the column headed DEGREE indicate the degree for which the student is studying. Where no abbreviation is given, the student is pursuing miscellaneous studies without being registered as a candidate for a degree. The figures in the column headed CREDIT indicate the number of hours of work taken by candidates for degrees prior to the beginning of the current academic year, 1896-97, and completed without conditions, or credited to them on advanced standing. By an hour of work is meant the equivalent of one exercise a week for one semester. Compare page 103.

Mary Irene Amidon,	B.L.	51	<i>Cedar Rapids, Ia.</i>
Flora Larned Anderson,			<i>Midland.</i>
Mary Anderson,	B.L.	28	<i>Detroit.</i>
Mary Josephine Anderson,	B.L.	103	<i>Battle Creek.</i>
Nellie Florence Anderson,	Ph.B.	89	<i>Vincent, Ia.</i>
Charles Sumner Andrus,	A.B.	54	<i>Ann Arbor.</i>
Julia Morehouse Angell,	Ph.B.	76	<i>Chicago, Ill.</i>
Ralph Clark Apted,	B.S.	13	<i>Grand Rapids.</i>
Frank Jones Arbuckle,	B.L.	28	<i>Toledo, O.</i>
Effa A. Armstrong,	Ph.B.		<i>Chelsea.</i>
Jerome Bernard Armstrong,			<i>Shenandoah, Ia.</i>
Marguerite Ascher,			<i>Saginaw, West Side.</i>
Arthur Frederick Ashbacker,	Ph.B.	33	<i>Ludington.</i>
Norman Swain Atcheson,	B.S.		<i>Detroit.</i>
Frederick Stiles Atwood,	Ph.B.	38	<i>Saginaw, East Side.</i>
Oliver Kossuth Atwood,	A.B.		<i>Saginaw, East Side.</i>
John Auer,	B.S.	50	<i>Chicago, Ill.</i>
Eliza Jane Austin,	A.B.	32	<i>Detroit.</i>
Frederick Pasqua Austin,			<i>Allegan.</i>
Frederick Clark Averill,	B.S.	61	<i>Perrysburg, O.</i>
Lois LeBaron Avery,	B.L.	52	<i>Ann Arbor.</i>
George Ford Axtell,	B.L.		<i>Ann Arbor.</i>
Lucius Babcock,	B.S.	20	<i>Ionia.</i>
Stephen Cone Babcock,	B.S. (Chem.)	96	<i>Buffalo, N. Y.</i>
Ellen Botsford Bach,	A.B.	8	<i>Ann Arbor.</i>
Frank Staples Bachelder,	B.S.	30	<i>Saint Charles, Minn.</i>
Standish Backus,	A.B.	56	<i>Detroit.</i>
Theodore Bacmeister,	A.B.	61	<i>Toulon, Ill.</i>
Georgia Farrand Bacon,	B.S. (Bio.)	108	<i>Pontiac.</i>
Margaret Reardon Bacon,			<i>Detroit.</i>
Herman William Bailey,			<i>Brentcreek.</i>
Naomi Ashley Bailey,	A.B.	62	<i>Port Huron.</i>
Anna Mary Baker,	B.L.	60	<i>Terre Haute, Ind.</i>
Bert Webster Baker,			<i>Sioux City, Ia.</i>
Grace Maris Baker,	B.L.		<i>Kendallville, Ind.</i>
Ida Lavinia Baker,			<i>Woodville, O.</i>
George Edward Baldwin,	B.L.		<i>Saint Johns.</i>
Edna Lenore Ballard,	B.L.	97	<i>Ann Arbor.</i>
Frederick Charles Ballard,	A.B.	93	<i>North Branch.</i>
Katherine Forrest Ballentine,	A.B.	29	<i>Port Huron.</i>
Grace Franauer Bammel,	B.L.	92	<i>Detroit.</i>
Martha White Bancker,	A.B.	85	<i>Jackson.</i>
Meta Alice Bancroft,	B.L.		<i>Ann Arbor.</i>

Rush Banks,	B.L.	88	<i>Novi.</i>
James William Bannon,	Ph.B.	21	<i>Portsmouth, O.</i>
Bertha Emily Barber,	A.B.	93	<i>Norwalk, O.</i>
Ida Leora Barber,	A.B.	82	<i>Grand Rapids.</i>
Edward Emerson Barbier,			<i>Benton Harbor.</i>
Clara Elizabeth Barclay,	A.B.	3	<i>Peoria, Ill.</i>
Louise Elizabeth Barker,	A.B.	15	<i>Davenport, Ia.</i>
Anna Morrell Barnard,	A.B.	36	<i>Saginaw, West Side.</i>
Richard Marshall Barnhart,			<i>Ann Arbor.</i>
Edna Hope Barr,	Ph.B.	6	<i>Battle Creek.</i>
Lola Mildred Barrows,			<i>Big Rapids.</i>
John Henry Bartelme,	B.L.		<i>Chicago, Ill.</i>
Alfred Castle Bartholomew,	Ph.B.	6	<i>Michigan City, Ind.</i>
Henry Lincoln Bartlett,	B.S.	44	<i>Boston, Mass.</i>
Edna Merrill Bartley,	B.L.		<i>Fulton, Mo.</i>
Ruth Anne Bartley,			<i>Fulton, Mo.</i>
Caroline Bary,	Ph.B.	66	<i>Detroit.</i>
Elmer Sereno Bassett,	B.S.	89	<i>Ann Arbor.</i>
Sophie Estelle Batchelder,	Ph.B.	51	<i>Grass Lake.</i>
Katherine Bateman,			<i>Centreville.</i>
Edgar Bates,	B.S. (Bio.)	88	<i>Bear Lake.</i>
Henry William Batterman,	B.L.		<i>Elgin, Ill.</i>
Francis Leon Bauer,	B.S.	32	<i>Hastings.</i>
Frank Langan Baumgardner,			<i>Toledo, O.</i>
Fred Lockwood Baxter,	Ph.B.		<i>Grand Rapids.</i>
Richard Eddy Baylis,	B.S.		<i>Saint Johns.</i>
Gertrude Beakes,	Ph.B.	5	<i>Bloomington, N.Y.</i>
Harriet Elizabeth Beard,	Ph.B.	64	<i>Detroit.</i>
Thomas Beath, Jr.,	Ph.B.	32	<i>Detroit.</i>
Eva Mary Beattie,	Ph.B.		<i>Saginaw, East Side.</i>
Cora Jipson Beckwith,	B.L.	20	<i>Grand Rapids.</i>
Elmer Nelson Beebe,	Ph.B.		<i>Big Rapids.</i>
Julia Henrietta Beese,	B.S.	11	<i>Saginaw, East Side.</i>
Beatrice Ollie Belford,	Ph.B.		<i>Detroit.</i>
Clara Rebekah Bell,	A.B.	17	<i>Ann Arbor.</i>
Winifred Ernestine Beman,	A.B.	47	<i>Ann Arbor.</i>
Edwin Jenison Bement,	Ph.B.	90	<i>Lansing.</i>
Arthur Harold Benefiel,	B.S.	32	<i>Ann Arbor.</i>
Ella Collins Bennett,			<i>Ann Arbor.</i>
Lee Fent Bennett,			<i>Valparaiso, Ind.</i>
George Stuart Benson, Jr.,	B.L.		<i>Detroit.</i>
George Nelson Bentley,	B.L.		<i>Elm.</i>
Nancy Malana Bentley,	Ph.B.		<i>Marshall.</i>

Rudolph Best,	B.S.	83	<i>Davenport, Ia.</i>
Ebenezer George Beuret,			<i>Flint.</i>
Edna Bevans,	Ph.B.	27	<i>Englewood, Ill.</i>
Laura Helen Bevans,	Ph.B.	54	<i>Englewood, Ill.</i>
Estella Anna Bigelow,			<i>Corunna.</i>
Lilian Marion Bigham,	A.B.	78	<i>Ann Arbor.</i>
John Chester Bills,	Ph.B.	28	<i>Allegan.</i>
Ida Elizabeth Bingham,			<i>Buffalo, N. Y.</i>
Roswell Fairchild Bishop,	Ph.B.	32	<i>Ludington.</i>
Howard Berkey Bishop,	B.S.		<i>Chicago, Ill.</i>
Charles Edward Blanchard,	B.L.	29	<i>Blissfield.</i>
Irene Martha Blanchard,	A.B.	85	<i>Minonk, Ill.</i>
Jeannette Blanchard,			<i>Minonk, Ill.</i>
George Neil Blatt,	Ph.B.	36	<i>Elwood, Ill.</i>
Arthur Judson Bleazby,	Ph.B.	16	<i>Kalkaska.</i>
Annie Bock,	Ph.B.	48	<i>Akron, O.</i>
Cora Louise Bodwell,	A.B.	22	<i>Grand Rapids.</i>
Winifred Bogle,	A.B.	8	<i>Ann Arbor.</i>
Jennie Bogner,			<i>Detroit.</i>
Ivaleta Boice,	Ph.B.	92	<i>Lansing.</i>
Cecile Adele Bond,			<i>Ann Arbor.</i>
Maurice Buford Bonta,	B.S. (Bio.)	92	<i>Harrodsburg, Ky.</i>
Charles John Borchardt,	B.L.	44	<i>Menominee.</i>
Mabel Bosworth,	A.B.	97	<i>Ann Arbor.</i>
Eva Bothe,	B.L.	57	<i>West Bay City.</i>
Clara Louisa Botsford,	B.L.	58	<i>Kalamazoo.</i>
Elizabeth Boulson,	Ph.B.		<i>Negaunee.</i>
Robert Collyer Bourland,	A.B.	106	<i>Peoria, Ill.</i>
Alice May Boutell,	Ph.B.	67	<i>Detroit.</i>
Eva May Bowen,	B.S. (Bio.)	90	<i>Marathon, O.</i>
Herbert Powers Bowen,	B.L.		<i>Marathon, O.</i>
Josephine Bowen,	A.B.	12	<i>Ann Arbor.</i>
Wilbur Pardon Bowen,	B.S.	85	<i>Ypsilanti.</i>
Gertrude Adele Boynton,			<i>Grand Rapids.</i>
Bert John Bradner,	B.L.	48	<i>Plymouth.</i>
John William Bradshaw,	A.B.	24	<i>Ann Arbor.</i>
Bertha Brainerd,	B.L.	36	<i>Kalamazoo.</i>
Esther Braley,	A.B.	57	<i>Saginaw, West Side.</i>
Clarence Henry Brand,	B.S.	43	<i>Saginaw, West Side.</i>
Charles Daniel Brandriff,	B.L.	102	<i>Missouri Valley, Ia.</i>
Louise Marks Breitenbach,	Ph.B.	93	<i>Detroit.</i>
Daniel Jacob Brenneman,			<i>Spring Arbor.</i>
John Johnson Brewer,	A.B.	28	<i>Romeo.</i>

Mary Arvilla Brewer,	A.B.	55	<i>Romeo.</i>
Ima Gould Briggs,	Ph.B.	91	<i>Battle Creek.</i>
Jenny Idah Broad,	B.L.		<i>Ishpeming.</i>
Frederick Joseph Brogan,	A.B.		<i>Battle Creek.</i>
William Campbell Brooks,	A.B.		<i>Saginaw, East Side.</i>
Laura Baker Broomall,			<i>Cheyney, Pa.</i>
Archibald Brown,	B.S.		<i>Pontiac.</i>
Cosette Ellen Brown,			<i>Ann Arbor.</i>
Earle Mason Brown,	B.L.		<i>Battle Creek.</i>
Edward Thomas Brown,	Ph.B.	108	<i>Wolcott, N. Y.</i>
Florence Brown,			<i>Reed City.</i>
James Lehi Brown,	B.S.	94	<i>Pleasant Grove, Utah.</i>
Katherine Holland Brown,	B.L.	59	<i>Quincy, Ill.</i>
Mabel Maree Brown,	A.B.	36	<i>Port Huron.</i>
Orie Elmore Brown,	Ph.B.	33	<i>Marquette.</i>
William Henry Brown,			<i>Owosso.</i>
Sara Spencer Browne,	Ph.B.	103	<i>Ann Arbor.</i>
Grace Bruce,	Ph.B.		<i>Birmingham.</i>
Iva Bruce,	Ph.B.		<i>Birmingham.</i>
Myrtle May Bruner,	B.L.	101	<i>Wabash, Ind.</i>
Frank Egbert Bryant,	B.L.	31	<i>Grand Rapids.</i>
Julian Eugene Buchanan,			<i>Sterling, Col.</i>
Frank Peyton Buck,	Ph.B.	36	<i>Saint Johns.</i>
Delia Edith Bullock,	Ph.B.	59	<i>Howell.</i>
Minnie Louise Bunker,	Ph.B.	35	<i>Muskegon.</i>
Emma Daisy Burke,	B.L.	16	<i>Ann Arbor.</i>
Ray Haddock Burrell,	B.L.	89	<i>Ann Arbor.</i>
Ednah Deane Burington,	Ph.B.		<i>Conneaut, O.</i>
Ruth Hayward Burington,	Ph.B.		<i>Conneaut, O.</i>
Charles William Burrows,	A.B.	63	<i>Ann Arbor.</i>
Charles Ward Burton,	B.S.	50	<i>Detroit.</i>
Vernon E. Bush,	Ph.B.		<i>Battle Creek.</i>
Harriet Edwina Bushnell,			<i>Detroit.</i>
John Edward Butler,	B.L.	59	<i>Ludington.</i>
Juliet Morton Butler,	B.S. (Bio.)	103	<i>Ann Arbor.</i>
May Morton Butler,	B.S.	97	<i>Ann Arbor.</i>
Orma Fitch Butler,	A.B.	94	<i>Ann Arbor.</i>
Frederick Magnus Butzel,	Ph.B.	87	<i>Detroit.</i>
William Callan,	B.L.		<i>Detroit.</i>
Henry Clay Calhoun,	Ph.B.		<i>Clinton.</i>
Charles Beason Calvert,			<i>South Bend, Ind.</i>
Albert Alexis Campbell,	A.B.	94	<i>Leiter's Ford, Ind.</i>
Allan Campbell,	A.B.	51	<i>Detroit.</i>

Ira Alexander Campbell,	B.L.		<i>Whitehall.</i>
James Andrew Campbell,	A.B.		<i>Ypsilanti.</i>
Nellie Louise Campbell,			<i>Kent, O.</i>
William Clyde Campbell,	Ph.B.	1	<i>Joliet, Ill.</i>
Roy Bishop Canfield,	A.B.	96	<i>Ann Arbor.</i>
Amelia Louise Carey,	A.B.	15	<i>LaGrange, Ill.</i>
Edward Francis Carey,	A.B.	68	<i>Princeton, Ill.</i>
Elizabeth Mary Cargill,			<i>Grand Rapids.</i>
Margaret Sprague Carhart,	Ph.B.	32	<i>Ann Arbor.</i>
Francis Xavier Carmody,			<i>Watervliet.</i>
Martin Henry Carmody,			<i>Grand Rapids.</i>
Charles Albert Carpenter,	B.S.	34	<i>Eames.</i>
Laura Augusta Carpenter,	A.B.	93	<i>Ann Arbor.</i>
Luther Clarendon Carpenter,	B.S.	27	<i>Bay City.</i>
William Ransom Carpenter,	Ph.B.	76	<i>Iron Mountain.</i>
Mary Trowbridge Carson,	B.L.	8	<i>Ann Arbor.</i>
Charles Everett Cartwright,	Ph.B.	40	<i>Toledo, O.</i>
Grace Chloe Cartwright,	B.L.	27	<i>Oregon, Ill.</i>
Clara Lovina Case,	B.L.	20	<i>Ypsilanti.</i>
Elisha Warner Case,	Ph.B.		<i>Chicago, Ill.</i>
Minnie Cassidy,			<i>Chelsea.</i>
Rose Cassidy,	B.L.		<i>South Bend, Ind.</i>
Edward Burns Caulkins,	B.L.	38	<i>Detroit.</i>
Vera Chamberlain,	Ph.B.		<i>Montpelier, O.</i>
Samuel Lord Chambers,	B.L.		<i>Fort Atkinson, Wis.</i>
Edmund Claude Champion,	B.S. (Chem.)	47	<i>Three Rivers.</i>
Lucy May Champion,			<i>Three Rivers.</i>
Alice Chandler,			<i>Chicago, Ill.</i>
Edmund Hall Chaney,	A.B.		<i>Detroit.</i>
Elizabeth Grace Charlton,			<i>Louisville, Ky.</i>
Tai Yin Cheo,			<i>Kiukiang, China.</i>
Frank Culver Cheston,	Ph.B.	85	<i>Williamsport, Pa.</i>
Lelia Merilla Childs,	B.S.	56	<i>Ann Arbor.</i>
Charles Frisbie Chubb,	Ph.B.	92	<i>Coldwater.</i>
Emma Church,			<i>Saginaw, West Side.</i>
Gertrude May Chute,	Ph.B.		<i>Ann Arbor.</i>
Edith Maud Clark,			<i>Covington, Ky.</i>
Fanny Emmaline Clark,			<i>Ovid.</i>
Rufus Wheelright Clark, Jr.,	B.L.		<i>Detroit.</i>
Frances Elizabeth Clarke,			<i>Albion, N. Y.</i>
Ina Van Liew Clawson,			<i>Detroit.</i>
Prentiss Bowden Cleaves,	A.B.		<i>Bridgton, Me.</i>
Llewellyn Frank Cleveland,	B.L.		<i>Bellaire.</i>

Ernest Cleverdon,	B.L.	28	<i>Austin, Ill.</i>
Carolyn Belle Cline,	B.S.	53	<i>West Branch.</i>
Erle Elsworth Clippinger,	A.B.	22	<i>Pipestone.</i>
Leila Catherine Close,	Ph.B.	63	<i>Bellevue, O.</i>
Alphonso Morton Clover,	B.S.	40	<i>Lancaster, O.</i>
George Frank Clukey,	B.L.	85	<i>Mount Clemens.</i>
Martha Officer Coffin,			<i>Ann Arbor.</i>
Morse Moses Cohen,	B.L.		<i>Detroit.</i>
Frederick Standish Colburn,	A.B.		<i>Detroit.</i>
Harry Arthur Cole,	B.L.	111	<i>Chicago, Ill.</i>
Amy Angell Collier,			<i>Ann Arbor.</i>
William Alfred Comstock,	Ph.B.	32	<i>Alpena.</i>
Frank Coolbaugh Condon,			<i>Ann Arbor.</i>
Seymour Beach Conger,	Ph.B.		<i>Grand Rapids.</i>
Ruie Ann Connor,	Ph.B.	26	<i>Ann Arbor.</i>
Alice Helena Cook,	A.B.		<i>Forestville, N. Y.</i>
Amasa Day Cook, Ph.C.,	B.S.		<i>Warren, O.</i>
Charles Dean Cool,	A.B.	16	<i>Decatur, Ill.</i>
Edgar Louis Cooley,	Ph.B.	4	<i>Lansing.</i>
Byron Henry Coon,	Ph.B.	86	<i>Ann Arbor.</i>
Frank Lawrence Cooper,	B.S.		<i>Owosso.</i>
Harold Dunbar Corbusier,			<i>Ann Arbor.</i>
Philip Worthington Corbusier,			<i>Ann Arbor.</i>
Edward Samuel Corwin,	Ph.B.		<i>Plymouth.</i>
Henry Hobart Corwin,	Ph.B.	32	<i>Pontiac.</i>
George William Cottrell,	B.S.	38	<i>Detroit.</i>
Paul A. Cowgill,	B.S. (Bio.)	94	<i>Newaygo.</i>
Allan Priest Cox,	B.L.		<i>Detroit.</i>
Frederic Crary,			<i>Read, Ia.</i>
Adriel Alanson Crawford,	Ph.B.	61	<i>Owosso.</i>
Frank Elmer Creasey,	B.L.	58	<i>Three Rivers.</i>
Lee Cronbach,	B.L.		<i>Mount Vernon, Ind.</i>
Carrie Ann Crooks,	B.L.		<i>Kalamazoo.</i>
John Robert Crouse,	A.B.	89	<i>Fostoria, O.</i>
Nanna Cora Crozier,	B.L.	31	<i>Ann Arbor.</i>
Willard Lawson Cumings,			
B.S., <i>Mich. Agr. Coll.,</i>			<i>Grand Rapids.</i>
Harvey Lincoln Curtis,	Ph.B.		<i>Dansville.</i>
Blanche Seper Cushman,	Ph.B.	4	<i>Dexter.</i>
Winifred Campbell Daboll,	Ph.B.		<i>St. Johns.</i>
Karl Gustave Dahlstrom,	B.L.	97	<i>Ishpeming.</i>
Arthur Henry Dail,	B.L.		<i>Holt.</i>
Anna Agnes Daley,	A.B.	1	<i>Menominee.</i>

Maude Laurretta Daley,	A.B.	<i>Menominee.</i>
Arthur Dalley,		<i>Summit, Utah.</i>
Henrietta Marian Dalley, Ph.B., <i>Mc-</i>		
<i>Kendree Coll., M.S., ibid., Ph.B.</i>	90	<i>Lake Linden.</i>
Effie Lynch Danforth,	Ph.B.	95 <i>Ann Arbor.</i>
Horace Warren Danforth,	B.L.	97 <i>Denver, Col.</i>
Robert Southgate Danforth,	A.B.	51 <i>Ann Arbor.</i>
Howard Rich Daniels,	Ph.B.	27 <i>Owosso.</i>
Editha Lewis Dann,	Ph.B.	57 <i>Columbus, O.</i>
Albertus Darnell,	Ph.B.	69 <i>Hinckley, Ill.</i>
Morgan Lloyd Davies,	B.L.	<i>Dixon, Ill.</i>
Charles Bartlett Davis,	A.B.	62 <i>Detroit.</i>
Edwin Alfred Davis,	A.B.	28 <i>Chicago, Ill.</i>
Levi Orville Davis,		<i>Macomb.</i>
David Lake Davoll, Jr., Ph.C., B.S.	108	<i>Ann Arbor.</i>
Ralph Benedict Dean,	B.L.	48 <i>Vermontville.</i>
Robert Louis Dean,	B.L.	105 <i>Hinsdale, Ill.</i>
Walter Minturn Dean,	B.L.	47 <i>Chicago, Ill.</i>
Annie Louise Decker,	Ph.B.	33 <i>Battle Creek.</i>
Abraham Charles Deimel,	A.B.	4 <i>Chicago, Ill.</i>
Charles Fisher Delbridge,	B.S.	31 <i>Detroit.</i>
Thomas Garvin Denby,	Ph.B.	<i>Detroit.</i>
Nellie Grace Densmore,	Ph.B.	<i>Owosso.</i>
Genevieve Ledgard Derby,	B.S.	9 <i>Saginaw, East Side.</i>
Mary Elise DeVeney,	B.L.	55 <i>Chicago, Ill.</i>
Louis Robinson Dice,	B.L.	<i>Portsmouth, O.</i>
Julian George Dickinson,	Ph.B.	64 <i>Detroit.</i>
Lula J. Dickinson,	B.S.	33 <i>Gregory.</i>
Frank Diehl,	Ph.B.	24 <i>Holt.</i>
Raymond William Dikeman,		<i>Three Rivers.</i>
Florence Gertrude Dillon,		<i>Detroit.</i>
Charles Arthur Divine,		<i>Ann Arbor.</i>
Fred Leslie Divine,	B.S.	61 <i>Sycamore, Ill.</i>
James Joseph Divine,		<i>Ann Arbor.</i>
Harry Clifford Doane,	B.S.	64 <i>Ann Arbor.</i>
Louise Frances Dodge,	Ph.B.	25 <i>Adrian.</i>
Laura Dolese,	B.S.	33 <i>Chicago, Ill.</i>
Julia Donlan,	Ph.B.	29 <i>Ann Arbor.</i>
Alice Mabel Donnelly,	A.B.	32 <i>Grand Rapids.</i>
Charles Jacob Dovel,	Ph.B.	63 <i>Manistee.</i>
Samuel Hanson Dowden,	Ph.B.	92 <i>Greensburg, Ind.</i>
Elsie Grace Downer,	B.S.	<i>Hancock.</i>
Lawrence LaTourette Driggs,		<i>Portland, Ore.</i>

Frances Jewett Dunbar,			<i>Buffalo, N. Y.</i>
Anne Stuart Duncan,	B.L.	106	<i>Au Sable.</i>
Clara E. Dunn,	A.B.		<i>Lapeer.</i>
Marion Ida Durand,	Ph.B.		<i>Ann Arbor.</i>
Ida Mae Durkee,	B.L.	25	<i>Pontiac.</i>
Minnie Veronica Dwyer,	Ph.B.		<i>Ann Arbor.</i>
Frank Dwight Eaman,	B.L.	8	<i>Detroit.</i>
Allen Jay Easton,			<i>Hudson, N. Y.</i>
Gertrude Agnes Edwards,	Ph.B.	28	<i>Adrian.</i>
Maud Eggert,	B.S.		<i>Ann Arbor.</i>
John Henry Ehlers,			<i>Dayton, O.</i>
Mary Margaret Ehrhorn,	Ph.B.	27	<i>Rock Island, Ill.</i>
Louis Elbel,	B.L.	18	<i>South Bend, Ind.</i>
Georgie Ethelwynne Ellis,	B.L.		<i>Kankakee, Ill.</i>
Harold Hunter Emmons,	A.B.	96	<i>Ann Arbor.</i>
Frederick Engelhard,	A.B.	69	<i>Ann Arbor.</i>
Mary Louise Engelhard,	B.L.	109	<i>Ann Arbor.</i>
Philip Roswell Erickson,	Ph.B.		<i>Chicago, Ill.</i>
Elizabeth Thomas Evans,			<i>Samuels Depot, Ky.</i>
James Allison Evans,			<i>Erie, Pa.</i>
Nettie Julia Eveleth,	B.L.		<i>Corunna.</i>
Nina Ethel Eveleth,	Ph.B.		<i>Corunna.</i>
Margaret Watts Ewin,			<i>Fayette, Mo.</i>
Ina Louise Fagan,	Ph.B.		<i>Manistee.</i>
Edith Gertrude Fales,	Ph.B.		<i>Detroit.</i>
Amelia Tertia Farnsworth,	Ph.B.	89	<i>Ann Arbor.</i>
Mabel Osburn Farrand,			<i>Detroit.</i>
Charles Henry Farrell,	B.S.	58	<i>Dexter.</i>
George Edwards Fay,	B.S.	34	<i>Chicago, Ill.</i>
Fannie Jessie Felver,	Ph.B.	59	<i>Batavia, Ill.</i>
Gustave Herman Ferbert,	Ph.B.	89	<i>Cleveland, O.</i>
Walter Eliot Ferguson,	Ph.B.		<i>Detroit.</i>
Oceana Ferrey,	Ph.B.	93	<i>Lansing.</i>
Albert Henry Fiebach,	A.B.	35	<i>Henrietta, O.</i>
Mabel Wilson Filkins,	A.B.	2	<i>Howell.</i>
Rebecca Elizabeth Finch,	A.B.	48	<i>Stanton.</i>
Ida May Finley,	B.S.	42	<i>Battle Creek.</i>
Bertha May Fish,	Ph.B.	90	<i>Thornton.</i>
Dora Clementine Fisher,	Ph.B.	88	<i>Ann Arbor.</i>
Ella May Fitch,	Ph.B.	90	<i>Clinton, Ia.</i>
Grace Sarah Flagg,	A.B.	47	<i>Ann Arbor.</i>
James Harmon Flinn,	B.L.	110	<i>Detroit.</i>
Emilie Agnes Flintermann,	Ph.B.	54	<i>Detroit.</i>

Mary Flowers,		<i>Detroit.</i>
Belle Fogo,	A.B.	<i>Rochester.</i>
Victoria Margaret Fohey,	Ph.B.	25 <i>Webster.</i>
Grattan Smiley Foley,	B.L.	8 <i>Council Bluffs, Ia.</i>
John Wilkes Ford, Jr.,	B.S.	<i>Waukegan, Ill.</i>
Benton Walter Forkner,		<i>Anderson, Ind.</i>
Archibald Alexander Forshee,	B.L.	56 <i>Dixboro.</i>
Helen Daisy Fortaine,	B.S.	25 <i>Decatur.</i>
Wille Alvin Forward,	Ph.B.	17 <i>Marian, Ind.</i>
Martyn Howard Foss,	B.L.	8 <i>Chicago, Ill.</i>
Frances Alma Foster,	B.L.	102 <i>Detroit.</i>
Homer Redfield Foster,	Ph.B.	90 <i>Benton Harbor.</i>
Walter Seymour Foster,	B.L.	8 <i>Lansing.</i>
Estelle Helen Fox,		<i>Hinsdale, Ill.</i>
Charles Sigmund Frank,	Ph.B.	<i>Chicago, Ill.</i>
Colman Dudley Frank,	Ph.B.	97 <i>Toledo, O.</i>
Harry Joseph Frank,	B.L.	8 <i>Chicago, Ill.</i>
George Ernest Frazer,	A.B.	85 <i>Ann Arbor.</i>
Marian Frazer,	B.S.	52 <i>Ann Arbor.</i>
Ingeborg Sophia Fredhund,	B.S.	<i>Ishpeming.</i>
Elmer Leslie Freeman,	A.B.	13 <i>Detroit.</i>
James Leslie French,	A.B.	32 <i>Grand Rapids.</i>
Isadore Freud,	B.L.	24 <i>Detroit.</i>
Jacob Lincoln Freud,	B.L.	67 <i>Detroit.</i>
Lavinia Catherine Freuchtel,	B.L.	8 <i>Saginaw, West Side.</i>
Mary Emma Fuller,	Ph.B.	<i>Waterman, Ill.</i>
Eliza Ellen Fyan,	A.B.	74 <i>Port Huron.</i>
Albert Henry Galentine,	Ph.B.	20 <i>Muskegon.</i>
Minnie Julia Gardner,	B.L.	68 <i>Ann Arbor.</i>
Jessie Elizabeth Garlock,	Ph.B.	<i>Howell.</i>
Gwynn Garnett, Jr.,	B.L.	25 <i>Chicago, Ill.</i>
Christian Frederick Gauss,	A.B.	59 <i>Ann Arbor.</i>
Edward Francis Gee,	Ph.B.	89 <i>Ann Arbor.</i>
Henry Mills Gelston,	A.B.	<i>Ann Arbor.</i>
Austin George, Jr.,	Ph.B.	<i>Ypsilanti.</i>
Harriet Louise George,	Ph.B.	57 <i>Ypsilanti.</i>
Louise Rosseel Gibbs,	B.L.	8 <i>Detroit.</i>
Faith Holt Gilbert,	Ph.B.	110 <i>Detroit.</i>
Fenton Lewis Gilbert,	B.S.	28 <i>Gibsonburg, O.</i>
John L. Gilchrist,	B.L.	<i>Schoolcraft.</i>
Ralph Edmund Gilchrist,	B.L.	<i>Alpena.</i>
Mabel Elizabeth Gillett,	B.L.	30 <i>Independence, Ia.</i>
Elizabeth Graves Gilmore,	B.L.	<i>Ypsilanti.</i>

William Henry Gleysteen,	A.B.	88	<i>Alton, Ia.</i>
Irene Kathryn Goddard,			<i>Denver, Col.</i>
Mary Alice Goddard,			<i>Ann Arbor.</i>
Flora Luella Goeschel,	B.S.	17	<i>Bay City.</i>
Bertha Marion Goldstone,	Ph.B.		<i>Saginaw, East Side.</i>
Grace Fanny Goodman,	Ph.B.	120	<i>Westport, Mo.</i>
Dwight Livingston Good-			
year,	B.L.	8	<i>Hastings.</i>
Herbert Charles Gore,	B.S. (Chem.)	32	<i>Chicago, Ill.</i>
Alice Mary Graham,	A.B.	66	<i>Saginaw, West Side.</i>
Gordon Larimore Gray,	Ph.B.		<i>Niles.</i>
Thomas Starr Gray,			<i>Oakdale, Cal.</i>
Carl Munson Green,	B.S.	26	<i>Charlotte.</i>
Frederic Herbert Green,	A.B.		<i>Saginaw, West Side.</i>
Burton Otto Greening,	Ph.B.	5	<i>Saint Joseph.</i>
Bessie Edith Greenman,			<i>Decatur.</i>
Lulu Greer,	A.B.		<i>Pontiac.</i>
Earl Ralph Lamont Gregg,	Ph.B.		<i>Ann Arbor.</i>
Nathan Cesna Grimes,	B.L.		<i>Sturgis.</i>
Robert Grinnell,	B.L.	33	<i>Chicago, Ill.</i>
Harold Thomas Griswold,	B.S.	24	<i>Chicago, Ill.</i>
Arthur Burtis Groesbeck,	B.L.		<i>Grand Rapids.</i>
Harry A. Groves,	Ph.B.	31	<i>Webster City, Ia.</i>
Augustus Ernest Guenther,	B.S. (Bio.)	90	<i>Sandusky, O.</i>
Lillian Ellen Hadley,			<i>Madrid, N. Y.</i>
William Henry Hadley,			<i>Ann Arbor.</i>
Walter David Hadzsits,	A.B.	75	<i>Detroit.</i>
Leonard Dixon Haigh,	B.L.		<i>Port Huron.</i>
Elbert Edgar Haight,	B.L.		<i>Sycamore, Ill.</i>
Florence Mooers Hall,	B.L.	21	<i>Chicago, Ill.</i>
Florence Slocum Hall,	A.B.	26	<i>Grand Rapids.</i>
OEta M. Hall,	B.L.		<i>Manchester.</i>
James Perrine Hamilton,			<i>Saint Joseph.</i>
Burt David Hammond,	B.L.	16	<i>Saline.</i>
Clarence Robert Hanes,	A.B.	54	<i>Schoolcraft.</i>
James Hannan, Jr.,	Ph.B.	16	<i>Chicago, Ill.</i>
Otto Henry Hans,	Ph.B.	64	<i>South Bend, Ind.</i>
Hanna Hansen,	A.B.	51	<i>Elgin, Ill.</i>
Ida Christine Harbeck,	B.L.	35	<i>Detroit.</i>
Roy Mitchell Hardy,	A.B.	46	<i>Waterloo, Ill.</i>
Edith Harkness,	A.B.	30	<i>Philadelphia, Pa.</i>
Harriet Harkness,	A.B.		<i>Philadelphia, Pa.</i>
Charles LeRoy Harlan,	Ph.B.	61	<i>Atlantic, Ia.</i>

Harriette Ellen Harlan,	A.B.	44	<i>Grand Rapids.</i>
William Robert Harper,	B.L.	4	<i>Middleville.</i>
Norman Follétt Harriman,			<i>Ann Arbor.</i>
Ernest Frederick Harrington,	B.L.	21	<i>Port Huron.</i>
Jerome Benjamin Harrington,	B.L.	29	<i>Watseka, Ill.</i>
Matilda Agnes Harrington,	Ph.B.	76	<i>Dubuque, Ia.</i>
Elizabeth Ann Harris,	B.L.	55	<i>Vernon.</i>
John Wistar Harris,	B.S.	57	<i>Ann Arbor.</i>
Julian Hartwell Harris,	A.B.	62	<i>Detroit.</i>
William Benson Harrison,	Ph.B.	44	<i>Imlay City.</i>
Edwin Bret Hart,	B.S. (Chem.)	112	<i>Sandusky, O.</i>
William Everett Hartman,	B.S. (Chem.)	68	<i>Chicago, Ill.</i>
Jennie Evalyn Hassett,	B.L.		<i>Negaunee.</i>
Frank Arthur Hatch,	Ph.B.		<i>Detroit.</i>
Minnie Mae Hathaway,	A.B.	58	<i>Lakeville, N. Y.</i>
Merritt Mattison Hawxhurst,	A.B.	54	<i>Ann Arbor.</i>
Nellie Myra Hayes,	B.S. (Bio.)	108	<i>Grand Rapids.</i>
Joseph Wilber Haynes,	B.L.		<i>Peru, Ind.</i>
Henry Thomas Heald,	Ph.B.	61	<i>Grand Rapids.</i>
Elizabeth Catherine Healy,			<i>Fort Dodge, Ia.</i>
Kate Healy,	Ph.B.	45	<i>Fort Dodge, Ia.</i>
Irma Anne Heath,			<i>Grand Rapids.</i>
Dorcas Hedden,	B.L.	90	<i>Charlton, N. Y.</i>
Fred Heffelbower,	A.B.	96	<i>Ann Arbor.</i>
Mary Holland Heffernan,	A.B.	20	<i>Marquette.</i>
Olga Katharine Hegeler,	B.L.	12	<i>LaSalle, Ill.</i>
Zuleikha Hegeler,	B.L.	37	<i>LaSalle, Ill.</i>
James Heggie,	B.S. (Chem.)	100	<i>Joliet, Ill.</i>
Henry Heitmann,	Ph.B.	28	<i>New Bremen, O.</i>
Harry Helfman,	A.B.	74	<i>Detroit.</i>
Carrie Hemenger,			<i>Algonac.</i>
May Caroline Henderson,	A.B.	60	<i>Flint.</i>
Grace Asenath Hendrickson,			<i>Ann Arbor.</i>
George David Kerr Hendry,	B.S.	68	<i>Ann Arbor.</i>
Thomas Bravais Henry,			<i>Independence, Kan.</i>
Harry Patterson Herdman,	Ph.B.	33	<i>Zanesville, O.</i>
Mary Plane Herrick,			<i>Independence, Ia.</i>
Walter Dwight Herrick,	A.B.	64	<i>Oak Park, Ill.</i>
Henry William Hess,	B.S.	62	<i>Toledo, O.</i>
William Hugh Hess,	B.S.	56	<i>Woodstock.</i>
Alice Jovita Hickey,	B.L.	30	<i>Michigamme.</i>
Ernest Gotthold Hildner,	Ph.B.	42	<i>Detroit.</i>

Abbie Franks Hill,	B.L.		<i>Pontiac.</i>
Annie Louise Hill,	A.B.	94	<i>Detroit.</i>
Cary LeRoy Hill,	A.B.	24	<i>Chelsea.</i>
Eva Jane Hill,	A.B.	71	<i>Chicago, Ill.</i>
Isadore Leon Hill,	A.B.	100	<i>Detroit.</i>
Eva Amelia Hillman,	Ph.B.		<i>Pontiac.</i>
Frederic William Hillyer,	Ph.B.	4	<i>Grand Rapids.</i>
Percy Albert Himes,	B.L.	31	<i>Grand Rapids.</i>
Herman William Hippen,			<i>Pekin, Ill.</i>
Mary Etta Hipple,	A.B.	60	<i>Elgin, Ill.</i>
John Breckenridge Hitchcock,			<i>Ware, Mass.</i>
Arthur Joseph Hoare,	Ph.B.		<i>Manistee.</i>
Eugenia Hobbs,	Ph.B.	11	<i>Nineveh, N. Y.</i>
Ida Mabel Hodgdon,	Ph.B.	96	<i>Lyons, Kan.</i>
Max Robertson Hodgdon,	A.B.	8	<i>Amy.</i>
Julia Mott Hodge,	Ph.B.	97	<i>Auburn, Ind.</i>
Clayton Hoffman,	B.L.	25	<i>Allegan.</i>
Edna Marie Holbrook,	B.S.	96	<i>Ann Arbor.</i>
Jessie Roberta Holderby,			<i>Ann Arbor.</i>
Charles Benjamin Hole,	B.L.	96	<i>Chicago, Ill.</i>
†Lemuel Homer Hole,			<i>Chicago, Ill.</i>
Abram James Holland,			<i>Detroit.</i>
Mable Edith Holmes,	Ph.B.	65	<i>Saginaw, East Side.</i>
Walter Herbert Holsinger,	Ph.B.	28	<i>Kendallville, Ind.</i>
Leonard Counsellor Honesty,	A.B.	29	<i>Memphis, Tenn.</i>
Robert Milton Hopkins,	A.B.	15	<i>Canton, Mo.</i>
Dorsey Reno Hoppe,	B.L.	50	<i>Chelsea.</i>
Ida May Hopson,	B.L.	5	<i>Detroit.</i>
Royal Barnhart Hovey,	B.S.	26	<i>Independence, Ia.</i>
Berton James Howard,	B.S.	94	<i>Ionia.</i>
Clara Mariette Howard,	B.S.		<i>Ionia.</i>
Leonidas Hubbard, Jr.,	B.L.	88	<i>Waldron.</i>
Winifred Hubbell,	A.B.	31	<i>Saginaw, West Side.</i>
George Deming Hudnutt,	B.L.		<i>Big Rapids.</i>
Arthur Scott Hudson,	A.B.	59	<i>Alpena.</i>
Mary Helen Stewart Hudson,	B.S.	30	<i>Ann Arbor.</i>
Martin Charles Huggett,	A.B.	26	<i>Charlotte.</i>
Charles Parkyn Hulce, A.B.,			
<i>Hillsdale College,</i>	A.B.		<i>Hillsdale.</i>
William Otis Hullinger,			<i>Nashville.</i>
Edwin Haynes Humphrey,	B.L.	85	<i>Detroit.</i>
Grace Pauline Hunt,	A.B.	62	<i>Saint Johns.</i>
Helen Grace Hunter,	B.L.	63	<i>South Lyon.</i>

DeWitt Clinton Huntoon,	B.L.	93	<i>Waterford.</i>
Harry Rogers Hurlbut,	A.B.	27	<i>Chicago, Ill.</i>
Charles DuBois Hurrey,	B.S.		<i>Ann Arbor.</i>
Clarence Barzillai Hurrey,	B.S.		<i>Ann Arbor.</i>
Arthur Mastick Hyde,	A.B.	36	<i>Princeton, Mo.</i>
Fritz Carleton Hyde,	B.S. (Bio.)	57	<i>Grand Rapids.</i>
Paul Phelps Ingham,	A.B.	59	<i>Hersey.</i>
Helen Amelia Irland,	Ph.B.	63	<i>Ann Arbor.</i>
Cecil KcKee Jack,	Ph.B.	25	<i>Decatur, Ill.</i>
Ida Louise Jackman,			<i>Elgin, Ill.</i>
Harrison Clarke Jackson,	B.L.	96	<i>Chicago, Ill.</i>
Kate Jackson,			<i>Saginaw, West Side.</i>
Lambert Lincoln Jackson,	A.B.	104	<i>Ypsilanti.</i>
May Selma Jachnig,	B.S.	28	<i>Hancock.</i>
Will Edward Jones,	B.S.	72	<i>Saginaw, East Side.</i>
Harriet Edith Jenkinson,	Ph.B.	70	<i>Chicago, Ill.</i>
Allie May Jenks,			<i>Sand Beach.</i>
Pearl Jenney,	B.L.		<i>Ann Arbor.</i>
George Darwin Jennings,	B.S. (Bio.)	95	<i>Tonica, Ill.</i>
Grace Wheeler Jennings,	A.B.	93	<i>Toledo, O.</i>
Burton Branch Johnson,	A.B.	32	<i>Owosso.</i>
James Dawson Johnson,			<i>Decatur, Ill.</i>
Julia Johnson,	Ph.B.		<i>Duluth, Minn.</i>
Edward Horton Jones,	A.B.	6	<i>Chicago, Ill.</i>
Estelle Lorraine Jones,	A.B.	66	<i>Petersburg.</i>
Percy Wall Jones,			<i>Dowagiac.</i>
Matthew Joyce,			<i>Fort Dodge, Ia.</i>
†John Wesley Judson,			<i>Detroit.</i>
Clyde Watkins Jump,	B.S. (Bio.)	28	<i>Plainfield, Ill.</i>
Charles Frank Juttner,	B.L.		<i>Menominee.</i>
Demeter Kalenoff,	B.S.	54	<i>Ann Arbor.</i>
Marion Clara Kanouse,	Ph.B.		<i>Manistee.</i>
Walter Edward Kapp,	A.B.		<i>Dubuque, Ia.</i>
Clyde Fenworth Karshner,	B.L.		<i>Big Rapids.</i>
Max Emanuel Kaufman,	Ph.B.	11	<i>Saint Louis, Mo.</i>
John Blaine Keating,	B.S. (Chem.)	94	<i>Helena, Mon.</i>
Louis Ward Keeler,	Ph.B.	30	<i>Mount Clemens.</i>
Albert Henry Keith,	B.L.	31	<i>Chicago, Ill.</i>
Jessie Keith,	A.B.	90	<i>Edwardsport, Ind.</i>
Mildred Hannah Keith,	A.B.	13	<i>Pontiac.</i>
Carl Sears Kennedy,	B.S. (Bio.)	70	<i>Rockford, Ill.</i>
Charlotte Elizabeth Kennedy,	B.L.	77	<i>Au Sable.</i>
Gertrude Blanche Kennedy,	B.L.	25	<i>Au Sable.</i>

Charles Wolcott Kent,	B.S.	35	<i>Kalamazoo.</i>
Edna Baldwin Kenton,	A.B.	90	<i>Springfield, Mo.</i>
Thomas Keppel,	B.S.		<i>Zeeland.</i>
Edward Laverie Kilbourne,	B.L.	32	<i>Ann Arbor.</i>
Edward Bassett Killian,	Ph.B.		<i>Allegan.</i>
John David Kilpatrick,	B.L.		<i>New Castle, Wyo.</i>
Ann Eliza Kimball,	Ph.B.	58	<i>Detroit.</i>
Annie Dorcas Kimlin,	A.B.	91	<i>Quincy, Ill.</i>
Helen Louise Kimlin,	Ph.B.	30	<i>Quincy, Ill.</i>
Linus Edwin Kimmel,	Ph.B.	53	<i>Kendallville, Ind.</i>
William Charles Frederick Kinitz,			<i>Lapeer.</i>
Frank Cameron Kinsey,	A.B.		<i>Grand Rapids.</i>
Edward Percival Kirby,			<i>Grand Haven.</i>
William Archie Kishpaugh,	A.B.	91	<i>Seymour Lake.</i>
Horace Kitchel,	B.L.	35	<i>Coldwater.</i>
Macy Kitchen,	A.B.	51	<i>Saginaw, East Side.</i>
Ida Elizabeth Kittredge,	Ph.B.	19	<i>Ann Arbor.</i>
William Louis Klein,			<i>Detroit.</i>
Albert Henry Knapp,	B.S.	24	<i>Saint Charles, Minn.</i>
Byron Harry Knapp,	B.L.	14	<i>Owosso.</i>
Rudolf Ernst Knapp,	B.S.	76	<i>Evansville, Ind.</i>
Thad Johnson Knapp,	Ph.B.	62	<i>Northville.</i>
Stuart Edwin Knappen,	A.B.	64	<i>Grand Rapids.</i>
Emma Frances Knight,	A.B.	56	<i>Marlborough, Mass.</i>
Marguerite Knowlton,	A.B.	24	<i>Ann Arbor.</i>
James Lawrence Kocher,	B.L.		<i>Bluffton, Ind.</i>
Louis Alvin Kreis,	B.L.	45	<i>Cincinnati, O.</i>
Bell Krolak,	Ph.B.	93	<i>Detroit.</i>
Butler Lamb,	Ph.B.		<i>Chicago, Ill.</i>
Grace Lord Lamb,	B.L.	96	<i>Erie, Pa.</i>
Evangeline Lodge Land,	B.S.(Chem.)	48	<i>Detroit.</i>
Clarence Haskell Lander,	B.S.(Bio.)	115	<i>Ann Arbor.</i>
Stephen Herbert Langdon,	A.B.	64	<i>Ida.</i>
Myrtie Ellen Lare,	B.S.		<i>Howell.</i>
Robert Young Larned,	Ph.B.	57	<i>Lansing.</i>
Marion Hortense Larsen,	B.S.		<i>Manistee.</i>
Orlo John Lasenby,	Ph.B.		<i>Mason.</i>
John Stuart Lathers,	B.L.	75	<i>Inkster.</i>
Olive Clarice Lathrop,			<i>Hastings.</i>
Hugh Law,	A.B.	23	<i>Flint.</i>
Katharine Harriet Law,	Ph.B.	39	<i>Flint.</i>
John Edward Lawless,	B.L.	60	<i>Des Moines, Ia.</i>

Erie Maude Layton,	A.B.	59	<i>Bay City.</i>
Margaret Rachel Layton,	A.B.		<i>Bay City.</i>
Frederick Augustus Leas,			<i>Ann Arbor.</i>
Clyde Leavitt,	B.L.		<i>Bellaire.</i>
Robert Owen LeBaron,	B.S.		<i>Pontiac.</i>
Lilabel Adda Lemon,	Ph.B.	30	<i>Ann Arbor.</i>
Mary Eleanor Lennon,	B.L.	35	<i>Flint.</i>
Mabell Stanley Leonard,	B.L.		<i>Detroit.</i>
Sadie Rosalyn Levitt,			<i>Grand Rapids.</i>
Max Levitt,	A.B.	104	<i>Lowell.</i>
Christine Mary Lilley,	Ph.B.	4	<i>Ann Arbor.</i>
Flora Ralston Linn,	Ph.B.	22	<i>Detroit.</i>
Ellen Hart Littlefield,	Ph.B.	27	<i>Detroit.</i>
Burton Edward Livingston,	B.S.(Bio.)	72	<i>Grand Rapids.</i>
Elizabeth Janette Lobb,	B.S.	4	<i>Negaunee.</i>
Eva May Locke,	A.B.	42	<i>Nashua, N. H.</i>
Mabel Gertrude Loder,	B.S.	58	<i>Lansing.</i>
Sigmund Edward Loeb,	A.B.	49	<i>Chicago, Ill.</i>
John Loeffler,	B.L.		<i>Ann Arbor.</i>
Allen Loomis,	B.S.	95	<i>Jackson.</i>
Frederic Morris Loomis,	A.B.	66	<i>Grand Rapids.</i>
†Fred Hale Loud,	Ph.B.		<i>Au Sable.</i>
Harry Kimball Loud,	A.B.	66	<i>Au Sable.</i>
Raymond Laird Lovell,	B.L.		<i>Covington, Ky.</i>
Abe Lowenhaupt,	B.L.		<i>Mount Vernon, Ind.</i>
George Bruckner Lowrie,	B.S.	62	<i>Detroit.</i>
Lulu Veronica Lusby,	Ph.B.		<i>Ann Arbor.</i>
James Leo Lynch,			<i>Wiscoy, Minn.</i>
Carolyn Blount Lynd,	Ph.B.	3	<i>Lockport, Ill.</i>
Alva Eden Lyon,	B.L.	96	<i>Ann Arbor.</i>
Theodore Charles Lyster,	Ph.B.	61	<i>Detroit.</i>
Carl Emil McAlvay,	Ph.B.	63	<i>Manistee.</i>
Susanne Onins Macauley,	Ph.B.	24	<i>Ann Arbor.</i>
Mary Jane McBride,	B.L.		<i>Corunna.</i>
Lewis Wilson McCandless,	A.B.	72	<i>Prescott, Ariz.</i>
Calvin McCarroll,	A.B.		<i>Royal Oak.</i>
John Hancock McClellan,	A.B.	109	<i>Lexington, Ky.</i>
Minnie McCormick,	B.S.		<i>Owosso.</i>
Agnes McCotter,	B.S.	32	<i>Pontiac.</i>
Leila Knickerbocker Mc-			
Cotter,	B.S.	32	<i>Pontiac.</i>
William Bloss McCourtie,			<i>Kalamazoo.</i>
Herbert Jay McCreary,			<i>Erie, Pa.</i>

John Brower McCreery,			<i>Detroit.</i>
Pearl McDonald,	A.B.	56	<i>Ann Arbor.</i>
John Seymour McElligott,	Ph.B.		<i>Manistee.</i>
Edward M. McElroy, B.S.,			
<i>Mich. Agr. Coll.,</i>	B.S.	106	<i>Kalamazoo.</i>
Katie Elizabeth McFadzean,	Ph.B.	91	<i>Port Huron.</i>
Robert Roy McGeorge,			<i>Almont.</i>
Norman King McInnis,	A.B.	56	<i>Saginaw, East Side.</i>
Florence Ewing MacIntyre,	B.L.	37	<i>Knoxville, Tenn.</i>
Leland William McJunkin,			<i>Okolona, Miss.</i>
Jessie Marion Mack,	Ph.B.	58	<i>Ann Arbor.</i>
William Lyman Mack,	A.B.	27	<i>Ann Arbor.</i>
Nellie McKay,	Ph.B.	38	<i>Caro.</i>
Robert Cameron McKay,	B.L.	22	<i>Caro.</i>
Susan Laura McKee,	A.B.	91	<i>Morrice.</i>
Robert McKeighan,	Ph.B.		<i>Saint Louis, Mo.</i>
Anna Thorne McLauchlan,	A.B.	88	<i>Chicago, Ill.</i>
John Frederick McLean,	B.L.		<i>Menominee.</i>
Sarah McLeod,	B.L.		<i>Schoolcraft.</i>
Robert Parker McMaster,	Ph.B.	64	<i>Dowagiac.</i>
Archibald Harold McMillan,	A.B.	40	<i>Bay City.</i>
Clara Elsa McMonagle,			<i>Ann Arbor.</i>
Agnes MacNaughton,	B.L.	32	<i>Ann Arbor.</i>
Anna Belle McOmber,	A.B.	22	<i>Ann Arbor.</i>
Russell Roy McPeck,	A.B.		<i>Charlotte.</i>
Irving Alvin Maltby,	A.B.	57	<i>Bay City.</i>
Effie Clare Mann,	B.L.	27	<i>Elgin, Ill.</i>
Alice Cary Manwarren,	B.S.	27	<i>Ann Arbor.</i>
André George Marion,	A.B.	25	<i>Elgin, Ill.</i>
Herbert Rogers Marlatt,			
L.L.B.,	A.B.	102	<i>Warrensburg, Mo.</i>
Helena Marquardt,	B.L.	68	<i>Mount Clemens.</i>
Adolph Irvine Marx,	A.B.	97	<i>Detroit.</i>
Mabel Irene Marsh,			<i>Tallmadge, O.</i>
Alvah Agar Marshall,	B.L.	26	<i>Chicago, Ill.</i>
Mabel Marshall,	B.L.		<i>Gaylord.</i>
Mary Estelle Marshall,	Ph.B.	30	<i>Chicago, Ill.</i>
Thomas Metlin Marshall,	B.L.		<i>Ann Arbor.</i>
William Marshall,	B.S.	89	<i>Ypsilanti.</i>
Allen Birch Martin,	B.S.	97	<i>Riverside, Cal.</i>
Cora Oliver Martin,	B.L.	25	<i>Decatur, Ill.</i>
Edward Hiram Storms			
Martin,	Ph.B.	99	<i>Chicago, Ill.</i>

Lida Chenoweth Martin,	B.L.	27	<i>Decatur, Ill.</i>
Margaret Delia Mason,	B.L.	38	<i>Muskegon.</i>
Ralph Clark Mason,	B.L.	85	<i>Ann Arbor.</i>
Minnie Matern,	B.L.		<i>Sandusky, O.</i>
Stanley M. Matthews,	B.L.	94	<i>Escanaba.</i>
Walter Royal Matthews,	B.L.		<i>Hastings.</i>
Carolina Maul,			<i>Kewanee, Ill.</i>
Colton Maynard,	A.B.	8	<i>Washington, D. C.</i>
George Franklin Mead,	Ph.B.	63	<i>Detroit.</i>
James Leonard Mee,	B.S.(Chem.)	49	<i>Ann Arbor.</i>
Howard B. Merrick,			<i>Wrightstown, Pa.</i>
Fanny Harvey Merrill,			<i>Bay City.</i>
Benjamin Bradford			
Metheany,	Ph.B.	15	<i>Grand Rapids.</i>
Elisabetha Meyerl,	Ph.B.	14	<i>Grand Rapids.</i>
Jessie Curry Mighell,	Ph.B.	30	<i>Aurora, Ill.</i>
Florence Pansie Mildon,	B.L.		<i>Ishpeming.</i>
Grace Grieve Millard,	Ph.B.	108	<i>Adrian.</i>
Armand Rudolph Miller,	B.S.(Chem.)	99	<i>Kansas City, Mo.</i>
Frances Winifred Miller,	B.L.	28	<i>Kenosha, Wis.</i>
Guy Alonzo Miller,	A.B.	60	<i>Detroit.</i>
Katharine Cools Miller,			<i>Ann Arbor.</i>
Louallen Fred Miller,	B.S.	28	<i>Aurora, Ill.</i>
Norman J. Miller,	B.S.(Bio.)	97	<i>Calvin, Ia.</i>
Stephen Ivere Miller, LL.B.,	B.L.	8	<i>Hotwell.</i>
Albert Taylor Mills,	Ph.B.	33	<i>Mount Palatine, Ill.</i>
Bertha Maude Mills,			<i>Ann Arbor.</i>
Genevieve Elizabeth Mills,	A.B.	60	<i>Ann Arbor.</i>
Lucius Warner Mills, Jr.,	B.S.	4	<i>Mason.</i>
Howard Daniel Minchin,			<i>Grand Rapids.</i>
Nellie Dustan Mingay,	Ph.B.		<i>Ann Arbor.</i>
Mabel Agnes Mitts,	B.L.	68	<i>Saginaw, East Side.</i>
William August Mogk,	A.B.	99	<i>Ann Arbor.</i>
Jeannette Monette,			<i>Chatfield, Minn.</i>
Frank Ruhlman Monfort,	B.L.		<i>Ithaca.</i>
Morris Wadsworth Montgomery,			<i>Lansing.</i>
Paul Broadley Moody,	A.B.	32	<i>Detroit.¹</i>
Charles Hubert Mooney,	B.L.	96	<i>Lake Odessa.</i>
Clara Louise Mooney,			<i>Lake Odessa.</i>
Vincent Cuthbert Mooney,	B.L.	57	<i>Chicago, Ill.</i>
Anna Moore,	B.L.	9	<i>Ann Arbor.</i>
Arthur Selwyn Moore,	B.L.		<i>Bay City.</i>
Laura Moore,	Ph.B.	38	<i>Saint Clair.</i>

Charles Rufus Morey,	A.B.	36	<i>Charlotte.</i>
Julia Louise Morey,	Ph.B.	93	<i>LaGrange, Ill.</i>
Warren Pearl Morrill,	Ph.B.	60	<i>Benton Harbor.</i>
Lucile Crane Morris,	B.L.		<i>Big Rapids.</i>
Mary Gertrude Morris,			<i>Ann Arbor.</i>
Roger Sylvester Morris,	A.B.		<i>Ann Arbor.</i>
Robert Morrison,			<i>Newaygo.</i>
Benjamin Carl Morse,	B.L.	108	<i>Ann Arbor.</i>
Ell'a Louise Morton,	Ph.B.	2	<i>Chelsea.</i>
Paul Moses,	Ph.B.	29	<i>Chicago, Ill.</i>
Edward Camillus Mulroney,			<i>Fort Dodge, Ia.</i>
Louise Emily Mumm,			<i>Moline, Ill.</i>
Victor Alphonso George Murrell, LL.B.,			<i>Ann Arbor.</i>
Lillie Josephine Muszgnug,	B.L.		<i>Aurora, Ill.</i>
Oscar Reiff Myers,	Ph.B.	40	<i>New Enterprise, Pa.</i>
Alice Nash,			<i>Detroit.</i>
Thomas Alvin Neal,	B.S.	35	<i>Ann Arbor.</i>
William Wilmon Newcomb,	B.S.(Bio.)	109	<i>Detroit.</i>
Arthur Roy Nieman,			<i>Freeport, Ill.</i>
Clifford Lyman Niles,	Ph.B.	30	<i>Anamosa, Ia.</i>
Edla Maud Niles,	Ph.B.	44	<i>Ann Arbor.</i>
Eva Lula Niles,	Ph.B.	23	<i>Ann Arbor.</i>
Marion Relief Nims,	A.B.	31	<i>Sand Beach.</i>
Walton Edward Nims,	A.B.	56	<i>Sand Beach.</i>
George Falley Ninde,	A.B.		<i>Detroit.</i>
Timothy Francis Nolan,	B.L.		<i>Ishpeming.</i>
Albert Noordewier,	B.S.	63	<i>Jenison.</i>
John Noordewier,	A.B.	28	<i>Jenison.</i>
Robert White Norrington,	B.L.	24	<i>West Bay City.</i>
Bret Nottingham,	B.S.		<i>Lansing.</i>
Martin William Numbers,	Ph.B.	90	<i>Apple Creek, O.</i>
Edwin Prime Nutting,	A.B.	2	<i>Howell.</i>
Reuben Lovell Nye,			<i>Quincy.</i>
Frank Oakley,	B.S.	42	<i>Huntley, Ill.</i>
William James O'Brien, A.B., <i>Detroit College,</i>	B.S.(Chem.)	81	<i>Detroit.</i>
Mary Elizabeth O'Connor,			<i>Denver, Col.</i>
Clara Sienna O'Hearn,	B.L.		<i>Ann Arbor.</i>
Stella Agnes O'Hearn,	Ph.B.		<i>Ann Arbor.</i>
Gustavus Adolphus Ohlinger,	A.B.	44	<i>Ann Arbor.</i>
Schuyler Seager Olds, Jr.,	Ph.B.	60	<i>Lansing.</i>
Paul Oliver,	B.S.	34	<i>Chicago, Ill.</i>

Albert Oscar Olson,	B.L.	60	<i>Chicago, Ill.</i>
Abraham Philip Oppenheim,	Ph.B.	30	<i>Dowagiac.</i>
Clinton Samuel Osborn,	A.B.	88	<i>Grand Rapids.</i>
Morley Ernest Osborne,	B.L.	32	<i>Denmark.</i>
Joe Carlos Osburn,	Ph.B.	30	<i>Owasso.</i>
Abraham Lincoln Osgood,	A.B.	56	<i>Pittsfield, N. H.</i>
Belle Lucinda Otis,	Ph.B.	88	<i>Ann Arbor.</i>
Marion Adelia Otis,	A.B.	93	<i>Ann Arbor.</i>
August Henry Overschmidt,			<i>Manchester.</i>
Winifrede Owen,			<i>Grand Rapids.</i>
Charles Brainerd Paddock,	B.S.	93	<i>Wichita, Kan.</i>
Edna Littlefield Paddock,	B.S.	89	<i>Coldwater.</i>
Ralph Hugh Page,	B.S.(Chem.)	40	<i>Chicago, Ill.</i>
Henrietta Pagelsen,			<i>Grand Haven.</i>
John Chauncey Palmer,	B.L.	31	<i>Big Rapids.</i>
Mabel Esther Palmer,	B.L.	19	<i>Ann Arbor.</i>
Anna Pancoast,	Ph.B.	4	<i>Ashtabula, O.</i>
Henry Hall Parke,	B.L.	58	<i>Sycamore, Ill.</i>
Flora Estelle Parker,	B.L.	39	<i>Detroit.</i>
Florence May Durand Parker,	A.B.	33	<i>Ann Arbor.</i>
John Leon Parker,	B.L.	71	<i>Charles City, Ia.</i>
John Marshall Parker,	B.L.	62	<i>Ann Arbor.</i>
Cora Josephine Parkhurst,	A.B.		<i>Barnard, Vt.</i>
Milton Ray Parmelee,	B.L.	94	<i>Concord.</i>
Alice Cary Patten,	Ph.B.	93	<i>DeKalb, Ill.</i>
Caroline Esther Pattengill,	A.B.	28	<i>Ann Arbor.</i>
Susan Frances Patterson,	A.B.	81	<i>Detroit.</i>
George Fred Paul,	A.B.	41	<i>Peoria, Ill.</i>
Harry G. Paul,	A.B.	95	<i>Peoria, Ill.</i>
Robert Elijah Peacock,			<i>Chicago, Ill.</i>
Grace Darling Peele,	B.S.	24	<i>Jersey City, N. J.</i>
James Blakeley Pell,	A.B.	28	<i>Akron, O.</i>
Carl Homer Pelton,	A.B.		<i>Oakwood.</i>
Walter Scott Penfield,	A.B.	8	<i>Auburn, Ind.</i>
Inez Christabel Perrin,	A.B.	87	<i>Detroit.</i>
Joseph Vincent Persing,			<i>Reese.</i>
Gustof Adolf Person,			<i>Muskegon.</i>
Frances Lillian Petit,	A.B.	32	<i>Port Huron.</i>
John H. Petrie,	B.L.	85	<i>Saint Johns.</i>
Sybil Matilda Pettee,	Ph.B.		<i>Ann Arbor.</i>
Adoniram Judson Pettis,	B.L.		<i>Flint.</i>
Roy Elton Pettit,	B.L.	45	<i>Ithaca.</i>
Clara B. Phelps,	B.S.		<i>Pontiac.</i>

Margaret Van Ness Phelps,			<i>Ann Arbor.</i>
Nancy Seymour Phelps,	Ph.B.	24	<i>Ann Arbor.</i>
George Ray Philbrick,	B.S.		<i>Mount Clemens.</i>
Olive Blanche Phillips,	B.L.	18	<i>Kalamazoo.</i>
Maud Philips,			<i>Ann Arbor.</i>
Paul Monroe Pilcher,	B.S.	65	<i>Brooklyn, N. Y.</i>
Julia Pike,	Ph.B.	91	<i>Grand Rapids.</i>
Hazen Stuart Pingree, Jr.,	B.L.		<i>Detroit.</i>
Walter Boughton Pitkin,	A.B.		<i>Detroit.</i>
William Aaron Pitzele,	B.L.	6	<i>Chicago, Ill.</i>
Lewis Clark Plant,	Ph.B.	87	<i>Nunica.</i>
Sadie Augusta Platt,	Ph.B.	5	<i>Saint Joseph.</i>
Florence Helen Pomeroy,	B.L.	37	<i>Ann Arbor.</i>
Edith Merrill Popkins,			<i>Ann Arbor.</i>
Klaas Poppen,	Ph.B.	105	<i>Drenthe.</i>
Dorothy Belle Poppy,	A.B.	90	<i>Kendallville, Ind.</i>
DeForest Porter,			<i>Lockport, N. Y.</i>
Frank Ira Post,	B.S.(Chem.)	32	<i>Coldwater.</i>
Grace Trowbridge Potter,	A.B.	75	<i>Detroit.</i>
Harry Barent Potter,	B.L.	29	<i>Saginaw, West Side.</i>
Nathan S. Potter,	B.S.(Chem.)	59	<i>Jackson.</i>
Robert Bliss Potter,	B.L.	29	<i>Saginaw, West Side.</i>
William Gilbert Povey,	B.L.	98	<i>Detroit.</i>
Josephine Perry Powell,	Ph.B.	64	<i>Marquette.</i>
Florine Maude Pratt,	Ph.B.	45	<i>Coldwater.</i>
John Harcourt Prentis,	B.L.		<i>Detroit.</i>
Herbert Freeburn Prescott,			<i>Ann Arbor.</i>
Orville Wilbur Prescott, LL.B.,			<i>Cleveland, O.</i>
Jennie May Price,	Ph.B.	96	<i>Jackson.</i>
Robert Davis Pringle,			<i>Springfield, O.</i>
Flora Prowdley,	B.L.	66	<i>Constantine.</i>
William Prest Purfield,	B.S.	30	<i>Ann Arbor.</i>
Matthew Quinlan,	Ph.B.	58	<i>Chicago, Ill.</i>
Irving Tomlinson Raab,	A.B.	14	<i>Flint.</i>
Floyd Hamilton Randall,	B.S.	89	<i>West Bay City.</i>
Thomas Ernest Rankin,	A.B.	67	<i>Detroit.</i>
Charles Fish Rathfon,	B.S.	60	<i>Port Huron.</i>
Alonzo Herbert Raymond,	A.B.		<i>Detroit.</i>
Rena Bowne Raymond,	Ph.B.	9	<i>Ann Arbor.</i>
Lillian R. Rayner,	Ph.B.		<i>Reed City.</i>
Dell Hannah Read,	Ph.B.	29	<i>Shenandoah, Ia.</i>
Luella Jane Read,	Ph.B.	35	<i>Shenandoah, Ia.</i>
William Thomas Reece,	Ph.B.		<i>Jackson.</i>

Katherine Reed,			<i>Chicago, Ill.</i>
Alvena Dorothea Reichmann, A.B.	8		<i>Chicago, Ill.</i>
Charlotte Louise Reichmann,			<i>Chicago, Ill.</i>
May Lyle Reid,			<i>Champion.</i>
Rodolphe Ransom Reilly, B.L.	33		<i>Chicago, Ill.</i>
Orlando Schairer Reimold, A.B.	95		<i>Saginaw, West Side.</i>
Charles Henry Reynolds, Ph.B.			<i>Grand Rapids.</i>
Minerva Belle Rhines, B.L.	92		<i>Detroit.</i>
Charles Jacob Rice, B.S.	63		<i>Columbia.</i>
Edith Louise Rice, A.B.	60		<i>Ventura, Cal.</i>
Nellie Fuller Rice, A.B.	43		<i>Grand Rapids.</i>
Herbert Matteson Rich, B.L.	97		<i>Middleville.</i>
William Barrett Rich, Ph.B.	88		<i>Chicago, Ill.</i>
Florence Loring Richards, Ph.B.	60		<i>Ann Arbor.</i>
J. DeForest Richards,			<i>Douglas, Wyo.</i>
Ruby Ella Richardson, Ph.B.			<i>Detroit.</i>
Nellie Eveline Rickert, B.L.	55		<i>Elgin, Ill.</i>
Charles Augustus Riegelman, A.B.	28		<i>New York, N. Y.</i>
Irving Washington Riegel-			
man,	B.L.	26	<i>New York, N. Y.</i>
John Frederick Rieman,	B.S.(Chem.)	90	<i>Hadley.</i>
Laura Minnie Rinkle, Ph.B.	3		<i>Boonville, N. Y.</i>
Clarence Bingham Ripley, B.S.			<i>Hinsdale, Ill.</i>
Charlotte Jeanette Roberts, Ph.B.	87		<i>South Bend, Ind.</i>
Ida Estelle Roberts, B.L.			<i>Buchanan.</i>
Louise Lunsford Loving Rob-			
erts,	Ph.B.	91	<i>Ann Arbor.</i>
Marian Stevens Roberts, Ph.B.			<i>Traverse City.</i>
Christine Grace Robertson, Ph.B.			<i>Detroit.</i>
Georgia Oriana Robertson,			<i>Jewell, Kan.</i>
Harry Milton Robins, A.B.	8		<i>Salem.</i>
Cora Hattie Robinson,			<i>Saint Johns.</i>
Harry Charles Robinson, A.B.	64		<i>Detroit.</i>
Thomas Linton Robinson, Ph.B.			<i>Ravenna, O.</i>
Winnie Josephine Robinson,			<i>Battle Creek.</i>
Cora Adell Robison, B.S.	62		<i>Ann Arbor.</i>
Clifford Griffith Roe, A.B.	30		<i>Ann Arbor.</i>
Ellen Chapin Rogers, Ph.B.	105		<i>Grand Rapids.</i>
Curt Rosenow, B.S.(Chem.)	91		<i>Peoria, Ill.</i>
Augustine Rousseau, A.B.	58		<i>Peoria, Ill.</i>
Russell Sturgis Rowland, B.S.(Bio.)	74		<i>Grand Rapids.</i>
Ralph Loveland Roys, Ph.B.	13		<i>Saginaw, East Side.</i>
Herman Russell, B.S.	63		<i>Manistee.</i>

Lucy Hayes Russell,	B.L.		<i>Hart.</i>
Sadie P. Ryan,	A.B.	31	<i>Ann Arbor.</i>
Ada Murray Safford,	Ph.B.		<i>Plymouth.</i>
Sophie Rood St. Clair,	Ph.B.	2	<i>Ishpeming.</i>
Helen May St. John,	Ph.B.	26	<i>Ann Arbor.</i>
Irma Estelle Sanford,	Ph.B.	53	<i>Ionia.</i>
William Sanger,	A.B.	54	<i>Toledo, O.</i>
Charlotte Hale Sargeant,	Ph.B.		<i>Detroit.</i>
Gertrude Savage,	Ph.B.	53	<i>Cassopolis.</i>
Wirt Ira Savery,	B.S.		<i>Salem.</i>
Christabel Hortense Sawyer,	Ph.B.	50	<i>Cadillac.</i>
Theron Malcolm Sawyer,	B.S.	55	<i>Ludington.</i>
John Reimar Schacht,	B.S.	8	<i>Erie, Pa.</i>
Murray Seligman Schloss,	Ph.B.	48	<i>Detroit.</i>
Anna Amelia Schryver,			<i>Ann Arbor.</i>
Vera Zoe Schurtz,	A.B.		<i>Ann Arbor.</i>
Bruno Lyonel Schuster,	B.S.	117	<i>Milwaukee, Wis.</i>
Sophie Margaret Schwarz,	Ph.B.	11	<i>Aurora, Ill.</i>
†Murray Maywood Sears,			
M.D.,	B.S.	107	<i>Ann Arbor.</i>
Lucy Harrison Seeley,	A.B.	33	<i>Caro.</i>
Roda Selleck,	A.B.	62	<i>Bay City.</i>
Henry Ormal Severance,	A.B.	108	<i>Walled Lake.</i>
Mary Stewart Seymour,			<i>Reed City.</i>
Frank Gray Shaver,	B.L.	14	<i>Pittsburgh, Pa.</i>
Ida Ellen Shaw,	B.S.	78	<i>Clarksville, Ia.</i>
Kirk Shawgo,	B.L.	17	<i>Quincy, Ill.</i>
John Rawlins Sheean,	Ph.B.	89	<i>Anamosa, Ia.</i>
Lucie Abigail Shelley,	A.B.	57	<i>Cedar Rapids, Ia.</i>
Lloyd Montgomery Shepard,	B.L.		<i>Saint Joseph.</i>
Louise Shepard,	Ph.B.	29	<i>Battle Creek.</i>
Lizzie Lovette Sherman,	Ph.B.	3	<i>Muskegon.</i>
Bernath Pardee Sherwood,	B.L.	58	<i>Allegan.</i>
Bertha Marion Sherwood,	B.S.(Bio.)	86	<i>White Cloud.</i>
Sara Elmyra Sherwood,	B.S.		<i>Owosso.</i>
George Curtis Shirts,	Ph.B.	63	<i>Grand Rapids.</i>
Thomas Trufant Shoemaker,	Ph.B.	15	<i>Mount Clemens.</i>
Flora Ann Sigel,	Ph.B.	60	<i>Hamburg, N. Y.</i>
Joseph Sill,	A.B.	90	<i>Detroit.</i>
Lucie Abigail Sill,	A.B.	36	<i>Ann Arbor.</i>
Russell Mix Simmons,	B.L.	12	<i>Aurora, Ill.</i>
Charles Simons,	B.L.	61	<i>Detroit.</i>
Frank Stanton Simons,	A.B.	61	<i>Detroit.</i>

Eugenia Gratia Skinner,	Ph.B.		<i>Detroit.</i>
Charles Henry Slater,	Ph.B.	11	<i>Hinckley, Ill.</i>
Martha Anne Slater,	Ph.B.	30	<i>Ann Arbor.</i>
Katharyne Griffith Sleneau,	A.B.	91	<i>Ann Arbor.</i>
Genevieve Sloan,	Ph.B.		<i>Chicago, Ill.</i>
Archibald Whittier Smalley,	A.B.	74	<i>Chicago, Ill.</i>
Harrison Standish Smalley,	A.B.		<i>Chicago, Ill.</i>
Angus Smith,	Ph.B.	63	<i>Detroit.</i>
Arthur Maurice Smith,	Ph.B.	95	<i>Ionia.</i>
Bernice Sollitt Smith,	Ph.B.	29	<i>Ann Arbor.</i>
Charles Stevens Smith,	B.S.	62	<i>Battle Creek.</i>
Edward Dumont Smith,	B.S.		<i>Nashville.</i>
Gertrude Josephine Smith,	B.S.		<i>Hastings.</i>
Grace Mary Smith,			<i>Saline.</i>
Hervey Montgomery Smith,	A.B.	94	<i>Bloomsburg, Pa.</i>
Jeannette Smith,	B.L.	87	<i>Ann Arbor.</i>
Jessie Hunter Smith,	A.B.	94	<i>Ann Arbor.</i>
Lois Sollitt Smith,	B.L.	30	<i>Ann Arbor.</i>
Roy Burnett Smith,	B.S.	51	<i>Ann Arbor.</i>
Shirley Wheeler Smith,	B.L.	91	<i>Hastings.</i>
Syra Jane Smith,			<i>Portland.</i>
Winnifred Smith,	A.B.	60	<i>Cassopolis.</i>
Muir Burtenshaw Snow,	B.L.	24	<i>Detroit.</i>
Electra Blood Solis,			<i>Saint Clair.</i>
John Cecil Spaulding,	A.B.	87	<i>Saint Johns.</i>
Florence Isabel Spence,	Ph.B.		<i>Ann Arbor.</i>
John William Stacey,			<i>Delhi Mills.</i>
Henry Winslow Standart,	B.L.	35	<i>Detroit.</i>
Arthur Dickey Stansell,	B.L.	31	<i>Detroit.</i>
John Almon Starr,	Ph.B.	2	<i>Royal Oak.</i>
Francis Morley Stead,	A.B.	34	<i>Holloway.</i>
Lilian Anna Steele,	A.B.		<i>Maywood.</i>
Albert Augustus Stegeman,	B.L.		<i>Allegan.</i>
Derk Stegenga,	B.S.	56	<i>Brighton.</i>
Samuel Adolph Stein,	B.S.	33	<i>Chicago, Ill.</i>
Mary Salome Steinmetz,			<i>Philadelphia, Pa.</i>
Herbert Philip Stellwagen,	B.S.		<i>Wayne.</i>
Sadie Stephan,			<i>Gracey, O.</i>
Herman LeRoy Stevens,	Ph.B.	18	<i>Port Huron.</i>
Karl Krenkell Stevens,	B.S.	51	<i>Saginaw, East Side.</i>
Clinton George Stewart,	A.B.	91	<i>Newark, O.</i>
Kathrine Mitchell Stewart,			<i>Lake Linden.</i>
Louise Burnett Stickney,			<i>Grand Haven.</i>

Marion Stickney,	B.L.	35	<i>Grand Haven.</i>
Henry Increase Stimson,	A.B.	24	<i>Chelsea.</i>
George Chickering Stone,	B.L.	60	<i>Saginaw, West Side.</i>
Willard John Stone,	B.S.	15	<i>Gloversville, N. Y.</i>
Clara Dorothy Stonebraker,	Ph.B.	30	<i>Bay City.</i>
Albert Henry Stoneman,	A.B.	91	<i>Ann Arbor.</i>
Oscar Strauss,	Ph.B.	62	<i>Des Moines, Ia.</i>
Walter Hutchins Stray,	B.L.		<i>Ludington.</i>
Orno Dale Strong,	Ph.B.		<i>Tacoma, Wash.</i>
Rollo Marsh Struble,	B.L.		<i>Wauseon, O.</i>
Howard Wallace Stuch,	Ph.B.	25	<i>Allegan.</i>
Robert Lomax Study,	B.L.	38	<i>Richmond, Ind.</i>
Don David Sturgis,	B.L.	55	<i>Ann Arbor.</i>
Martha Theresa Sturgis,	B.L.	93	<i>Ann Arbor.</i>
Anna Zita Sullivan,	B.S.	29	<i>Ann Arbor.</i>
Edson Read Sunderland,	A.B.	89	<i>Ann Arbor.</i>
Florence Sunderland,	A.B.	35	<i>Ann Arbor.</i>
Carl Sundstrom,	B.S.	32	<i>Trenton.</i>
Richard Huss Sutphen,	A.B.	87	<i>Defiance, O.</i>
George Robert Swain,	A.B.	81	<i>Lakeport, N. H.</i>
Frederick Tyndall Swan,	A.B.	98	<i>Potsdam, N. Y.</i>
Norman Sweat,	B.S.		<i>Ann Arbor.</i>
Milo Jasper Sweet,			<i>Ann Arbor.</i>
Grace Isabel Swindler,	A.B.	8	<i>Ann Arbor.</i>
Andrew Lester Swinton,	B.S.	60	<i>Calumet.</i>
Parthenia Sykes,	A.B.	4	<i>Ann Arbor.</i>
James Shirley Symons,	A.B.	12	<i>Saginaw, East Side.</i>
Alfred Henry Syverson,	A.B.		<i>Lead, S. Dak.</i>
Ralph Cone Taggart,	Ph.B.	100	<i>Grand Rapids.</i>
Thomas Arthur Taper,	B.S.		<i>Lake Linden.</i>
Margaret Lloyd Tatlock,	A.B.	29	<i>Ann Arbor.</i>
Arthur Ostrander Taylor,	A.B.	12	<i>Ann Arbor.</i>
Charles Alexander Taylor,			
LL.B.,			<i>Negaunee.</i>
Ina Pamella Taylor,	Ph.B.	36	<i>Ann Arbor.</i>
James Stewart Taylor,	B.S.	51	<i>Almont.</i>
John Baccus Taylor,	B.S.		<i>Wheelersburg, O.</i>
Katharine Taylor,			<i>Ionia.</i>
Wesley Ewing Taylor,	B.S.	86	<i>Wheelersburg, O.</i>
William Taylor,			<i>West Chester, Pa.</i>
Ida Bell Tenney,	A.B.	93	<i>Troy, O.</i>
Maude Hayes Thayer,	A.B.	32	<i>Grand Rapids.</i>
Russell B. Thayer,	B.L.	11	<i>Saginaw, East Side.</i>

268 *Department of Literature, Science, and the Arts.*

John Frederick Thomas,	B.L.	78	<i>South Bend, Ind.</i>
Joseph Morris Thomas,	Ph.B.	54	<i>Douglas.</i>
Clarence Fred Thompson,			<i>Romeo.</i>
Firman Thompson,	B.S.(Chem.)	103	<i>New Carlisle, O.</i>
John Edmund Thompson,	Ph.B.		<i>Mount Clemens.</i>
Louise S. Thompson,	A.B.	67	<i>Ann Arbor.</i>
Mary Maclean Thompson,	B.S.	32	<i>Pontiac.</i>
May Evelyn Thompson,	B.L.	85	<i>Worden.</i>
Nathan Platt Thompson,	Ph.B.	15	<i>Port Huron.</i>
Nelson Walter Thompson,	B.S.	21	<i>Detroit.</i>
T. Letitia Thompson,			<i>Saranac.</i>
Julien Harrington Thomson,	B.L.	24	<i>Port Huron.</i>
Alice M. Thorne,	B.L.	30	<i>Toledo, O.</i>
Jefferson Gage Thurber,	Ph.B.	37	<i>Detroit.</i>
Mabel Tibbott,			<i>Ann Arbor.</i>
George Kevill Tinker,	A.B.		<i>Wheeling, W. Va.</i>
Eunice Evelyn Titus,			<i>Nicholson, Pa.</i>
Harry Torr Tomlinson,			<i>Michigan City, Ind.</i>
Charles Ernest Tompkins,	B.S.(Bio.)	57	<i>Benton Harbor.</i>
Lillian Medora Tompkins,	A.B.	100	<i>Bay City.</i>
Carrie Tower,	B.L.	21	<i>Milford.</i>
Sidney Beach Tremble,	B.L.	89	<i>Marshall.</i>
Lilly May Tressel,			<i>Terre Haute, Ind.</i>
Dic Hector Trowbridge,			<i>Ann Arbor.</i>
Charles Thomas Tryon,	A.B.	33	<i>Bay City.</i>
Frederick Max Tschirner,	B.S.(Chem.)	73	<i>Saint Louis, Mo.</i>
Monna Julia Tucker,	B.L.	99	<i>Ann Arbor.</i>
Henry Tupper,	B.S.	31	<i>Maple Park, Ill.</i>
Clara Turner,	Ph.B.	30	<i>Battle Creek.</i>
Leigh Martin Turner,	A.B.		<i>Battle Creek.</i>
Jane Owen Turner,			<i>Detroit.</i>
Lila Turner,	A.B.	44	<i>Battle Creek.</i>
Marvin Walter Turner,	B.L.	69	<i>Grand Haven.</i>
Nellie May Turner,	Ph.B.	70	<i>Monroe.</i>
Philip Gilbert Utley,			<i>Knobnoster, Mo.</i>
Robert Brainard Vaile,	B.S.	55	<i>Oak Park, Ill.</i>
Condit Brewer Van Arsdall,	B.S.	60	<i>Harrodsburg, Ky.</i>
Ralph Houston Van Cleve,	Ph.B.		<i>Marinette, Wis.</i>
Frank Vandeburg,	Ph.B.	58	<i>Ypsilanti.</i>
Lawrence Hoffman van den Berg,	B.L.	64	<i>Grand Haven.</i>
LaRue Van Hook,	A.B.	36	<i>El Paso, Ill.</i>
Arthur Henry Van Horn,	A.B.	73	<i>Charlotte.</i>

Edith Augusta Van Kleeck,	Ph.B.	23	<i>Bay City.</i>
Mabel Rebecca Van Kleeck,	Ph.B.	20	<i>Ann Arbor.</i>
Bertha Van Riper,	B.L.		<i>Dowagiac.</i>
Lisla Alice Van Valkenburg,	Ph.B.	24	<i>Ann Arbor.</i>
James Gerrit Van Zwaluwen-			
burg,	B.S.	76	<i>Holland.</i>
Victor Clarence Vaughan, Jr.,	A.B.		<i>Ann Arbor.</i>
Gertrude Elizabeth Vaughn,	A.B.	30	<i>Ann Arbor.</i>
Leonard D'Ooge Verdier,	A.B.	32	<i>Grand Rapids.</i>
Paul Harold Vernor,	A.B.	102	<i>Marshall.</i>
Katherine Elizabeth Vert,			<i>Flint.</i>
Sylvia Sanders Videtto,	A.B.	38	<i>Ann Arbor.</i>
Bertha Idell Vincent,	A.B.	27	<i>Grand Rapids.</i>
Paul Warren Voorhies,	B.L.	71	<i>Ann Arbor.</i>
William Vought,	Ph.B.	26	<i>Michigan City, Ind.</i>
Evelyn C. Vyn,	A.B.	26	<i>Grand Rapids.</i>
Frederick Rice Waldron,	A.B.	57	<i>Jackson.</i>
Charlotte Hall Walker,	A.B.	11	<i>Ann Arbor.</i>
Florence Walker,	Ph.B.	7	<i>Des Moines, Ia.</i>
Grace Bunting Wallace,	A.B.	100	<i>Ann Arbor.</i>
Charles Curtis Wallin,	A.B.	64	<i>Grand Rapids.</i>
Matthew John Walsh,	A.B.	76	<i>Grand Rapids.</i>
Minnie E. Walter,	A.B.	60	<i>Allegan.</i>
Nellie Margaret Walters,	B.L.	90	<i>Ishpeming.</i>
Max Walther,	Ph.B.		<i>Saginaw, East Side.</i>
Earl Clinton Ward,	B.L.		<i>Lansing.</i>
Grace Belle Ward,	B.S.	29	<i>Jacksonville, Ill.</i>
Winnie Caroline Warning,	B.L.	56	<i>Elkhorn, Wis.</i>
Selah Brown Warren,	Ph.B.		<i>Detroit.</i>
Samuel Hills Warriner,	A.B.	56	<i>Saginaw, East Side.</i>
Charles Lee Watson,	A.B.	85	<i>Corunna.</i>
John Clinton Watson,	Ph.B.	53	<i>Breckinridge.</i>
Clyde Irvin Webster,	Ph.B.	24	<i>Eaton Rapids.</i>
LeRoy Webster,			<i>Carthage, Mo.</i>
Montgomery Webster,	A.B.	29	<i>Ionia.</i>
Inis Harriet Weed,	Ph.B.		<i>Ann Arbor.</i>
Mildred Louise Weed,	B.L.	50	<i>Detroit.</i>
Beulah Stone Weeks,	A.B.	18	<i>Decatur.</i>
Louise Pauline Weinmann,	A.B.	60	<i>Ann Arbor.</i>
Harry Isaac Weinstein,	B.S.	55	<i>Phillipsburg, Mon.</i>
Leo Weiss,	B.L.		<i>Detroit.</i>
Harriet M. Welchli,	B.S.	64	<i>Bay City.</i>
Heber Armstrong Wells,			<i>Carthage, Mo.</i>

Welcome L. Wells,	B.S.		<i>Manistee.</i>
†James Augustine Welsh, LL.B.,			<i>Shamokin, Pa.</i>
Stella Westcott,	A.B.	102	<i>Maywood, Ill.</i>
Harry Eastman Westerdale,	A.B.		<i>Austin, Ill.</i>
Harry Augustus Weston,	Ph.B.		<i>Victor, Ia.</i>
Berthel Wetmore,	B.L.	45	<i>Cheboygan.</i>
Florence Kathryn Wetmore,	A.B.	27	<i>Ann Arbor.</i>
George Drake Wheeler,	A.B.		<i>Paulding, O.</i>
Sara Louise Wheeler,	A.B.	90	<i>Kalamazoo.</i>
William Mackey Wherry, Jr.,	B.S.	52	<i>Helena, Mon.</i>
Winfred Foster Whitcomb,	Ph.B.		<i>Englewood, Ill.</i>
Charles Grosvenor White,	B.L.	69	<i>Jonesville.</i>
Hugh White,	Ph.B.	28	<i>Lapeer.</i>
Jennie Patterson White,	Ph.B.	98	<i>Peoria, Ill.</i>
Roland Dare Whitman,	A.B.	88	<i>Ann Arbor.</i>
Ray Howard Whitten,	B.L.	4	<i>Utica, N. Y.</i>
John Jacob Whittlesey,	Ph.B.		<i>Detroit.</i>
Matthew Beale Whittlesey,	Ph.B.	32	<i>Detroit.</i>
Montie Lyons Wiers,	A.B.	63	<i>Davis.</i>
Nina Allene Wilber,	A.B.	57	<i>Howell.</i>
Elizabeth Lee Wilcox,	A.B.	58	<i>Negaunee.</i>
Frances Sarah Wilcox,	Ph.B.	91	<i>Adrian.</i>
Herbert Orlando Wilcox,			<i>Fenton.</i>
Nellie Wilcox,	Ph.B.	21	<i>Corunna.</i>
Cornelia Anne Wilding,	A.B.	40	<i>Fort Wayne, Ind.</i>
Benjamin George Wilkinson,	A.B.	91	<i>Battle Creek.</i>
Henry Elmore Wilkinson,	B.L.	53	<i>Denison, Tex.</i>
Arlo Ray Williams,	B.S.	61	<i>Ann Arbor.</i>
Arthur Rowland Williams,	A.B.		<i>Sault Ste. Marie.</i>
Ethelberta Williams,	B.L.	30	<i>Ann Arbor.</i>
Ethel May Williams,	Ph.B.		<i>Grand Rapids.</i>
Jennie Williams,			<i>Emporia, Kan.</i>
Theresa Gertrude Williamson,	B.S.	90	<i>New York, N. Y.</i>
Mabel Willison,			<i>Decatur.</i>
Levi Philip Ray Willoughby,	A.B.	8	<i>Ann Arbor.</i>
Clara Wilson,			<i>Lapeer.</i>
Floyd Arthur Wilson,	B.L.	8	<i>Ann Arbor.</i>
Jean Watson Wilson,	B.L.	104	<i>Detroit.</i>
Mary Elizabeth Wilson,			<i>Lewisburg, Pa.</i>
Ida Ethelwyn Wing,	B.L.	72	<i>Ludington.</i>
Jessie Henrietta Wing,	Ph.B.	31	<i>Ludington.</i>
Bertha Helen Wise,	B.L.	38	<i>Cedar Falls, Ia.</i>
Arthur Robert Wistrand,	B.L.	32	<i>Menominee.</i>

Mae Woldt,	B.S.	76	<i>Indianapolis, Ind.</i>
John David Wombacher,	B.S.(Chem.)	93	<i>Peoria, Ill.</i>
Junius Boyd Wood,	B.L.		<i>Elgin, Ill.</i>
Roscoe Mark Wood,	A.B.	23	<i>Saline.</i>
Rose Marie Wood-Allen,	B.S.	9	<i>Ann Arbor.</i>
Morrison Colyer Woodard,	Ph.B.	89	<i>Clinton, Wis.</i>
Thomas Robert Woodrow,	Ph.B.	68	<i>Ann Arbor.</i>
George Augustus Woodruff,	B.L.	38	<i>Benton Harbor.</i>
Jennie Morgan Woods,	A.B.	25	<i>Ann Arbor.</i>
Roy C. Woodworth,	B.L.	10	<i>Kansas City, Mo.</i>
Jedediah Foss Woolley,	B.L.	91	<i>Kanab, Utah.</i>
Arthur Roy Wren,	B.S.(Chem.)	67	<i>Muskegon.</i>
Bertha Wright,	B.S.	24	<i>Ishpeming.</i>
Daniel Hubbard Wright,	B.L.	105	<i>Mason.</i>
Mary Margaret Wurzburg,	Ph.B.		<i>Grand Rapids.</i>
Martha Elizabeth Wyant,			<i>White Pigeon.</i>
Carl Yaple,			<i>Mendon.</i>
Blanche Martha Young,	A.B.	70	<i>Marquette.</i>
Lafayette Young, Jr.	Ph.B.		<i>Des Moines, Ia.</i>
Mary Estelle Young,			<i>Danville, Ill.</i>
Allen Howard Zacharias,	B.L.	38	<i>Detroit.</i>
Elizabeth Zahner,	B.L.	87	<i>Saginaw, East Side.</i>
Theodore Zbinden,	A.B.	47	<i>Toledo, O.</i>
Louis Zimmerman,			<i>Chicago, Ill.</i>
Alma Marie Zwerk,	B.L.	27	<i>Saginaw, East Side.</i>

Department of Engineering.

FACULTY.

JAMES B. ANGELL, LL.D., *President.*

o } CHARLES E. GREENE, A.M., C.E., *Dean.*

L } WILLIAM H. PETTEE, A.M.

o } MORTIMER E. COOLEY, M.E.

L } CHARLES S. DENISON, M.S., C.E.

L } HENRY S. CARHART, LL.D.

L } OTIS C. JOHNSON, Ph.C., A.M.

o JOSEPH B. DAVIS, C.E.

L } ASAPH HALL, JR., Ph.D.

L } EDWARD D. CAMPBELL, B.S.

L } ALEXANDER ZIWET, C.E.

L } PAUL R. DE PONT, A.B., B.S., *Registrar.*

o CLARENCE G. TAYLOR, B.S., M.E.

L } GEORGE W. PATTERSON, JR., A.M., S.B.

L } JOHN O. REED, Ph.M.

L ELMER A. LYMAN, A.B.

L GEORGE O. HIGLEY, M.S.

L DAVID M. LICHTY, M.S.

L } JOHN R. EFFINGER, JR., Ph.M.

o } CLARENCE G. WRENTMORE, B.S.

L KARL E. GUTHE, Ph.D.

L ARTHUR G. HALL, B.S.

L JAMES W. GLOVER, Ph.D.

L } LOUIS A. STRAUSS, Ph.M.

L EDWIN C. GODDARD, Ph.B.

o } HERBERT J. GOULDING, B.S.

L HENRY L. COAR, A.M.

L } VICTOR E. FRANCOIS.

L PENOYER L. SHERMAN, Ph.D.

b } CHARLES E. ST. JOHN, Ph.D.

L OTTO E. LESSING, A.B.

a } JOHN R. ALLEN, B.S., M.E.

o } JOHN T. FAIG, B.M.E.

✓ SIDNEY D. TOWNLEY, M.S.

Other Instructors and Assistants.

ALICE L. HUNT,

✓ ROBERT A. WINSLOW.

✓ JOHN M. SMOOTS.

✓ HORACE T. PURFIELD.

STUDENTS.

RESIDENT GRADUATES.

NAME.	RESIDENCE.
James Laird de Vou, Jr., Ph.B., <i>Yale University</i> , 1893,	<i>Wilmington, Del.</i>
Sergius Paul Grace, B.S. [E.E.], 1896,	<i>Ann Arbor.</i>
Carroll Dunham Jones, B.S. [E.E.], 1893,	<i>Ann Arbor.</i>
Charles Gilbert Palmer, B.S. [E.E.], 1896,	<i>Detroit.</i>
Henry Lumsden Woolfenden, B.S. [E.E.], 1896,	<i>Detroit.</i>

CANDIDATES FOR A DEGREE IN ENGINEERING, STUDYING IN ABSENTIA.

NAME.	RESIDENCE.
Clarence Thomas Johnston, B.S. [C.E.], 1895,	<i>Cheyenne, Wyo.</i>
Julius Kahn, B.S. [C.E.], 1896,	<i>New York, N. Y.</i>
Charles Augustine Miner, B.S. [C.E.], 1895,	<i>New Orleans, La.</i>

UNDERGRADUATES.*

NAME.	COURSE.	CREDIT.	RESIDENCE.
Charles Gilbert Adams,			<i>Marquette.</i>
Wilbur Edward Adams,			<i>Ewen.</i>
Emanuel Anderson,	M.	42	<i>Chicago, Ill.</i>
James Chivis Armstrong,	E.	39	<i>Detroit.</i>
Frederic Everart Arnold,			<i>Ann Arbor.</i>
Norwood Braham Ayers,	E.	27	<i>Omaha, Neb.</i>
Benjamin Franklin Bailey,	E.	58	<i>Detroit.</i>

* The letters in the column headed **COURSE** indicate the work the student is pursuing as a candidate for a degree: C denoting civil engineering; M, mechanical engineering; E, electrical engineering. Where no abbreviation is given, the student is pursuing miscellaneous studies, or studies of the first year, without being registered as a candidate for a degree. The figures in the column headed **CREDIT** indicate the number of hours of work taken by candidates for degrees prior to the beginning of the current academic year, 1896-97, and completed without conditions, or credited to them on advanced standing. By an hour of work is meant the equivalent of one exercise a week for one semester. Compare page 133.

Fred Louis Baker,	M.	95	Hillsdale.
William Porter Baker,	E.	60	Woodville, O.
Frederic Crossgrove Barr,	E.	63	Ann Arbor.
Mark Bary,	E.	93	Detroit.
Frederick Paul Beach,	E.	76	Lexington.
Irving McCoullough Bean,	E.	13	Milwaukee, Wis.
Mark Brewer Beattie,	E.	20	Ann Arbor.
Edward Lewis Benedict,			Birmingham.
George Welcome Benham,	C.	91	Detroit.
John Walter Frink Bennett,	E.	48	Austin, Ill.
Claude Kingsley Bentley,			Owosso.
Frederic Adrian Bergbom,	M.	35	Chicago, Ill.
James Rowland Biddins,	E.	42	Detroit.
Will Ambrose Biggs,	M.	53	Ann Arbor.
Arthur Woodward Birdsall,	E.	78	Lansing.
Bert Norwood Blakeslee,	C.	63	Birmingham.
Birdsil Edwin Blanchard,	E.	28	Greenville.
Murray Blanchard,	C.	55	Peru, Ill.
Frederick King Boomhower,	E.	52	Chateaugay, N. Y.
Frederick Chittenden Borst,	M.	64	Denver, Col.
Stanislaus Evan Bounavicz,			Coldwater.
Alexander Boyd,	M.	31	Chicago, Ill.
Walter Channing Boynton,	M.	30	Detroit.
Fred Bradley,			Joliet, Ill.
Thomas Alfred Bragg,	M.	66	Grand Rapids.
Benjamin Nathan Braun,			Ann Arbor.
Deward Augustus Britten,	E.	103	Ann Arbor.
Irving J. Brown,	E.	57	Niles.
Louis Percy Brown,			South Haven.
Roy Wilcox Brown,	E.	65	Geneseo, Ill.
Frederick Lewis Browne,	M.	41	Bay City.
Edgar Ewell Brownson,	E.	64	Rochester.
Edward William Buckley,			Kalamazoo.
Fred Henry Burdick,	C.	102	Saginaw, East Side.
Joseph Aldrich Bursley,	M.	29	Fort Wayne, Ind.
Joseph Wallace Busch,	E.	26	Marquette.
John Winford Byers,	E.	73	Grand Rapids.
Melancthon Woolsey Campau,	M.	99	Detroit.
George Moseley Chandler,	E.	63	Chicago, Ill.
Washington Hobert Chapman,			Ypsilanti.
Paul Cheever,			Ann Arbor.
William Griswold Chese- brough,	M.	23	Detroit.

Carl Carleton Cleverdon,			<i>Austin, Ill.</i>
James Walter Clift,	M.	41	<i>Washington, D. C.</i>
Stephen Prentis Cobb,			<i>Kalamazoo.</i>
Ralph Collamore,	M.	91	<i>Toledo, O.</i>
Emmons Collins,	E.	106	<i>Western Springs, Ill.</i>
Edwin Warren Conable,	C.		<i>Independence, Ia.</i>
Charles Olney Cook,	M.	87	<i>Detroit.</i>
Edward Bliss Coolidge,	E.	68	<i>Detroit.</i>
Sollace Burroughs Coolidge,	E.	61	<i>Detroit.</i>
John Cooper,			<i>Amsterdam, N. Y.</i>
William Lee Cooper,	M.	36	<i>Saginaw, East Side.</i>
Leonard Porter Coulter,	E.	57	<i>Ann Arbor.</i>
John Shepherd Cowgill,	E.	62	<i>Three Rivers.</i>
Faust Franklin Crampton,	E.	85	<i>Monroe.</i>
Walter Turney Curtis,	C.	44	<i>Detroit.</i>
Henry Winter Daniels,	C.	49	<i>Onsted.</i>
Ralph Emerson Darling,			<i>Ann Arbor.</i>
Charles Baker Davis,			<i>Ann Arbor.</i>
George Coit Davis,			<i>Austin, Ill.</i>
Burt J. Denman,	E.	39	<i>Toledo, O.</i>
Isaac De Young,	C.	76	<i>Chicago, Ill.</i>
Bartlett Chase Dickinson,	C.	64	<i>Kalamazoo.</i>
Harry Hammond Dickinson,			<i>Nashville.</i>
Paul Andrew Dratz,			<i>Muskegon.</i>
John Hathaway Dressel,			<i>Kane, Ill.</i>
Wilbert Sheperd Drew,	M.	103	<i>Hillsdale.</i>
William John Dusse,			<i>Mount Clemens.</i>
Walter Dwight Edgar,			<i>Howell.</i>
John Adrian Elenbaas,			<i>Holland.</i>
Elmer Myron Ellsworth,	C.	93	<i>Thornville.</i>
Amos Floyd Everett,	C.	60	<i>Lansing.</i>
Philip Henry Falter,	C.	70	<i>Chicago, Ill.</i>
Arthur John Farmer,	C.	17	<i>Detroit.</i>
Thaddeus Loomis Farnham,	M.	86	<i>Green Oak.</i>
Howard Felver,	M.	63	<i>Batavia, Ill.</i>
David Gerould Fisher,			<i>Kalamazoo.</i>
George Frederic Fisher,	E.	57	<i>Ann Arbor.</i>
Robert Myron Fox,	C.	64	<i>Detroit.</i>
Frank Anton Fucik,	M.	61	<i>Chicago, Ill.</i>
Henry Geismer,	C.	98	<i>Ann Arbor.</i>
George Herbert Gibson,	E.	45	<i>Northville.</i>
Melvin Albertus Gilbert,	C.	62	<i>Bloomington, O.</i>
William Allen Gilbert,			<i>Spokane, Wash.</i>

Francis Fair Gillen,	C.	60	<i>Grand Haven.</i>
Leon Goldsmith,	E.	63	<i>Omaha, Neb.</i>
Ernest P. Goodrich,	C.	79	<i>Ypsilanti.</i>
Robert Leitch Gordon,			<i>Erie, Pa.</i>
Andrew Grabenstein,			<i>Lake Linden.</i>
Fred May Green,	M.	71	<i>Charlevoix.</i>
Jacob B. Gregg,			<i>Ada, O.</i>
Clarence Edward Groesbeck,	E.	54	<i>Grand Rapids.</i>
Charles Glazier Hampton, Jr.,			<i>Detroit.</i>
Herbert Osborn Hanford,	M.	70	<i>Detroit.</i>
Frederick Cyril Hannan,	C.	41	<i>Chicago, Ill.</i>
Burr Hardy,	M.	27	<i>Howell.</i>
Harry Eli Harrington,	E.	69	<i>Grand Rapids.</i>
Archie Lee Harris,	C.	51	<i>Orange, Mass.</i>
Harmon Augustus Harris,	E.	30	<i>Chicago, Ill.</i>
Sanford Frank Harris,	E.	30	<i>Chicago, Ill.</i>
Henry Thomas Harrison,	E.	93	<i>Saint Louis.</i>
Milton Charles Hartman,			<i>Chicago, Ill.</i>
LeRoy Morton Harvey,	E.	36	<i>Oak Park, Ill.</i>
Harry Harting,	E.	71	<i>Grand Rapids.</i>
William Bradley Haskins,			<i>Detroit.</i>
Orra Emmet Heffelbower,	C.	32	<i>Ann Arbor.</i>
Frederick William Hen-			
ninger,	E.	95	<i>Brooklyn, O.</i>
Guy Potter Henry,	M.	20	<i>Davison.</i>
Burt Bradley Hodgman,			<i>Coldwater.</i>
Percy Melvin Holdsworth,	M.	79	<i>Traverse City.</i>
Frederick Ruthrauff Hoover,	C.	11	<i>Kansas City, Mo.</i>
James LeGrand Horth,			<i>Geneva, N. Y.</i>
Lewis Glasgow Howlett,	E.	37	<i>Trinidad, Col.</i>
Edwin Adolphus Hughes,	E.	70	<i>Elkhart, Ind.</i>
Loomis Hutchinson,	E.	95	<i>Ann Arbor.</i>
William Eugene Hutt,			<i>Saint Louis, Mo.</i>
Ernest Hiram Jacobs,	E.	15	<i>Owosso.</i>
Walter Henry Jennings,	M.	40	<i>Detroit.</i>
Allie Erastus Johnson,	C.	60	<i>Vassar.</i>
Herbert Arthur Johnston,			<i>Kalamazoo.</i>
Eugene Berkey Jones,	M.	31	<i>Grand Rapids.</i>
William Leasure Kimmel,			<i>Ypsilanti.</i>
Robert Allen King,			<i>Muskegon.</i>
Carlyle Kittredge,	E.	98	<i>Ann Arbor.</i>
Alfred Henderson Knight,			<i>Flint.</i>
Otto Adolph Krause,			<i>Grand Rapids.</i>

Charles Augustus LaFever,	E.	37	<i>Battle Creek.</i>
John Alexander Lamont,	C.	82	<i>Detroit.</i>
Tod John Leavitt,			<i>Corunna.</i>
Frederick Ewbank Leefe,	C.	60	<i>Detroit.</i>
Sydney Laurence Leefe,	E.	29	<i>Detroit.</i>
Willy Lehnartz,			<i>Grand Rapids.</i>
Ora Miner Leland,	C.	40	<i>Grand Haven.</i>
John Gurdon Lewis,	E.	105	<i>Oak Park, Ill.</i>
Ralph Garfield Lewis,			<i>Dayton, O.</i>
Alfred Emanuel Lindau,			<i>Chicago, Ill.</i>
Chester Brown Loomis,			<i>Ypsilanti.</i>
†Frederic Hale Loud,			<i>Au Sable.</i>
William Lewis Love,	C.	83	<i>Detroit.</i>
Ernest Lunn,	E.	10	<i>Stanton.</i>
Guy Webster Lunn,	E.	26	<i>Stanton.</i>
Thomas Edward Lynch,			<i>Wiscoy, Minn.</i>
Elmer Daniel Lyon,	M.	94	<i>Dexter.</i>
Thomas Francis McCrickett,	M.	114	<i>Bay City.</i>
Harry Stowe McGee,			<i>Jackson.</i>
James Cleveland McGormley,			<i>Tiffin, O.</i>
Walter Mac Gregor,			<i>Bay City.</i>
George Edward McKana,			<i>Escanaba.</i>
William Meek McKee,	E.	36	<i>Chillicothe, O.</i>
Henry Archibald McLean,			<i>Cass City.</i>
George D. McNaughton,			<i>Sault Ste. Marie.</i>
Royal John Mansfield,	C.	37	<i>Bay City.</i>
Edward Potter Marsh,	M.	71	<i>Oak Park, Ill.</i>
Harry Blackmore Marsh,	E.	8	<i>Dowagiac.</i>
Henry Stone Marsh,	E.	36	<i>Detroit.</i>
William Jonathan Marsh,	E.	55	<i>Pittsford, N. Y.</i>
William Freeman Martin,	M.	103	<i>Chicago, Ill.</i>
Shigeru Matsuyama,	M.	25	<i>Tokio, Japan.</i>
Walter Ballard Maurice,			<i>Detroit.</i>
Augustus Joseph Mayworm,	M.	37	<i>Detroit.</i>
William Keepers Maxwell,	E.	57	<i>Dallas, Texas.</i>
Ezra Burton Mead,			<i>Grand Rapids.</i>
Raymond Somers Mead,			<i>Winona, Minn.</i>
William Lincoln Miggett,			<i>Massillon, O.</i>
William Cook Miller,			<i>Ann Arbor.</i>
John Harold Montgomery,	E.	86	<i>Ann Arbor.</i>
Herbert Albion Moody,	E.		<i>Biddeford, Me.</i>
Henry Evans Moore,	C.	96	<i>Saginaw, East Side.</i>
Lyman Foote Morehouse,	E.	100	<i>Big Rapids.</i>

Charles John Holland Moritz, E.	107	<i>Saginaw, West Side</i>
John Theodore Mountain, E.	34	<i>Chicago, Ill.</i>
Harrison Curtis Mowers,		<i>Detroit.</i>
Melville Richard Moxley,		<i>Saginaw, East Side.</i>
Frederick Nelson Nelles,		<i>Bay City.</i>
William Frederick Valentine		
Neumann, E.	96	<i>Romeo.</i>
Fred Webster Newell, A.B.,		
<i>Bates College, A.M., ibid.,</i>		<i>Thetford, Vt.</i>
Claude George Newton, C.	73	<i>Ann Arbor.</i>
Lyell Spencer Nichols,		<i>Ann Arbor.</i>
Clarence Warren Noble, C.	46	<i>Ann Arbor.</i>
Dwight Gager North,		<i>Owosso.</i>
Arthur Wilcox Norton,		<i>Chicago, Ill.</i>
Clifton Ranney Norton, M.	50	<i>Sault Ste. Marie.</i>
Fay DeVeaux Olmsted, M.	78	<i>Detroit.</i>
Edwin Gale Osborn, E.	100	<i>Owosso.</i>
Floyd J. Page,		<i>Dexter.</i>
Roy Henry Parsons, C.	80	<i>Howell.</i>
Thomas James Penhallegan,		<i>Calumet.</i>
Joseph Perrien, B.S., <i>Mich.</i>		
<i>Agr. Coll.,</i> M.	114	<i>Ann Arbor.</i>
Olaf Gottlieb Petersen,		<i>Ann Arbor.</i>
Joseph Herman Pettersch, E.	70	<i>Grand Rapids.</i>
Arthur Wheeler Plum,		<i>West Bay City.</i>
Roy Ellis Potter,		<i>Greenville.</i>
George Charles Pratt, E.	92	<i>LaGrange, Ill.</i>
Charles Marvin Preston, E.	31	<i>Detroit.</i>
Otto Pruessman, E.	79	<i>Chicago, Ill.</i>
Ambrose Elliott Ranney,		<i>New York, N. Y.</i>
Edward Hawks Ravenscroft, C.	64	<i>Ravenswood, Ill.</i>
Porter Benson Rawson,		<i>Victor, N. Y.</i>
Clarence Webster Raynor, C.	64	<i>Adrian.</i>
A. Clare Reed, C.	32	<i>Joliet, Ill.</i>
Ard Ezra Richardson, M.	53	<i>Saginaw, East Side.</i>
Carlos Bangs Rider,		<i>Bay City.</i>
William Harrison Rippey, C.	93	<i>Ann Arbor.</i>
Fred Coleman Roberts, B.S.,		
<i>Earlham College,</i>		<i>West Elkton, O.</i>
Wellington Roberts, C.	22	<i>Rosedale.</i>
David Nathaniel Rosen, M.	35	<i>Muskegon.</i>
Eugene Albert Rummeler, M.	70	<i>Detroit.</i>
Richard William Runge,		<i>Winona, Minn.</i>

Herbert Lafayette Russell,	C.	66	<i>Ann Arbor.</i>
Frank Vincent Sackett,	E.	59	<i>LaGrange, Ill.</i>
James Thorpe St. Clair,	E.	66	<i>Ann Arbor.</i>
Arthur Gilbert St. John,	C.	71	<i>Ann Arbor.</i>
Frank Noble Savage,	C.	62	<i>Chicago, Ill.</i>
James Harvey Sawyer,	C.	52	<i>Ludington.</i>
Sydney Eugene Sayles,	E.	33	<i>Evart.</i>
Guy Burton Schiller,			<i>Niles.</i>
Francis Joseph Seabolt,	M.	89	<i>Ann Arbor.</i>
Louis Ernest Seas,	C.	17	<i>Vicksburg.</i>
Harry Mix Sedgwick,			<i>Chicago, Ill.</i>
Charles Gilchrist Simonds,	M.	93	<i>Schoolcraft.</i>
Weston Small,	C.	83	<i>Amboy, Ind.</i>
Lloyd Bown Smith,	C.	60	<i>Paola, Kan.</i>
Clarence William Squier,	E.	77	<i>Ann Arbor.</i>
Bruce Rowley Starkweather, E.		16	<i>Romeo.</i>
David Dennis Starr,			<i>Three Rivers.</i>
Robert Steck,	E.	77	<i>Chicago, Ill.</i>
Reginald Dewhurst Steele,	M.	19	<i>Wyandotte.</i>
Sidney John Steele,			<i>Maywood, Ill.</i>
Guy Enoch Sterling,			<i>Eaton Rapids.</i>
John Frederick Streib,	C.	72	<i>Bucyrus, O.</i>
Emil G. Struckman,	M.	94	<i>Bartlett, Ill.</i>
Arthur Charles Tagge,	E.	101	<i>Ann Arbor.</i>
William Whitney Talman,			<i>Detroit.</i>
Cary Davis Terrell,	E.	58	<i>Jackson, Miss.</i>
Claudius Horatio Thomas,	M.	65	<i>Detroit.</i>
Raphael Thomas, Jr.,	E.	24	<i>Champion.</i>
Ambrose Jacob Tower,			<i>Greenville.</i>
Alva Frederick Traver,			<i>Jackson.</i>
Howard Platt Treadway,	C.	76	<i>Grand Rapids.</i>
Melvin Sutphin Trevidick,	E.	101	<i>Saginaw, East Side.</i>
Frank Trott,	M.	36	<i>Muskegon.</i>
Alexander George Unsold,	M.	101	<i>Detroit.</i>
Frank R. Van Dusen,			<i>Bay City.</i>
Sutton Van Pelt,	C.	92	<i>LaPorte, Ind.</i>
Frederick Elwood Vickers,	E.	92	<i>Ishpeming.</i>
Theodore Vlademiroff,	E.	105	<i>Philippopolis, Bulgaria.</i>
Joseph Jacob Walser,			<i>Austin, Ill.</i>
Charles M. Waters,			<i>Lawton.</i>
William Ashley Waugh,	M.	15	<i>Wellsburg, W. Va.</i>
Albert Andrew Weber,	M.	71	<i>Jackson.</i>
Charles Delmar Webster,	M.	99	<i>Bay City.</i>

Charles Herman Weideman, M.	34	<i>West Bay City.</i>
Clarence Wright Whitney, M.	43	<i>Traverse City.</i>
Bertram DeWitt Wilber, E.	44	<i>Ypsilanti.</i>
Frederick J. Wilbur,		<i>Dowagiac.</i>
Roy Rodney Wiley, E.	93	<i>Peoria, Ill.</i>
Arthur Bryant Wood, E.	30	<i>Union City.</i>
Joseph Walter Wood,		<i>Niles.</i>
Morey Aldrich Wood, E.	69	<i>Battle Creek.</i>
William Righter Wood,		<i>Omaha, Neb.</i>
John Williams Woodruff,		<i>Ludington.</i>
Walter Heman Woods, E.	76	<i>Ann Arbor.</i>
Irving Charles Woodward, M.	96	<i>Iron Mountain.</i>
Charles Hartley Wright, E.	18	<i>Hancock.</i>
George Daniel Wuerfel,		<i>Toledo, O.</i>
Bert Starr York,		<i>Ann Arbor.</i>
Claude Earl Young,		<i>Corunna.</i>
Jacob George Young,		<i>Atkins, Ia.</i>

Department of Medicine and Surgery.

FACULTY.

JAMES B. ANGELL, LL.D., *President*.
ALBERT B. PRESCOTT, M.D., LL.D.
WILLIAM J. HERDMAN, Ph.B., M.D.
VICTOR C. VAUGHAN, Ph.D., Sc.D., M.D., *Dean*.
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PAUL C. FREER, Ph.D., M.D.
JAMES N. MARTIN, Ph.M., M.D.
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WARREN P. LOMBARD, A.B., M.D.
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G. CARL HUBER, M.D.
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WILLIAM F. BREAKKEY, M.D.
CYRENUS G. DARLING, M.D.
SIMON M. YUTZY, M.D.
DAVID M. LICHTY, M.S.
FRANK W. NAGLER, B.S.
ALDRED S. WARTHIN, Ph.D., M.D.
PERRY F. TROWBRIDGE, Ph.B.
HERBERT H. WAITE, A.B.

Other Instructors, Demonstrators, and Assistants.

JAMES G. LYND, M.D.
JEANNE C. SOLIS, M.D.
THEODORE L. CHADBOURNE, B.S., M.D.
SAMUEL A. MATTHEWS, M.D.

CHARLES D'A. WRIGHT, M.D.
 JESSE E. WHITSIT, B.S.
 D. MURRAY COWIE, M.D.
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 CHESTER B. BLISS, M.D.
 CASPER K. LAHUIS, M.D.
 DAVID G. COOLIDGE, M.D.
 GALEN G. CROZIER, B.S.
 HOWARD B. BAKER, B.S.
 THOMAS L. BURR, A.B.
 JULIAN McCLYMONDS, M.D.
 ARCHIBALD CAMPBELL, PH.B.
 CHARLES L. BLISS, B.S.

STUDENTS.

RESIDENT GRADUATES.

NAME.	RESIDENCE.
Merritt Grant Bassett, M.D.,	<i>Ann Arbor.</i>
James Fleming Breakey, M.D.,	<i>Ann Arbor.</i>
Hezekiah Doster, M.D., <i>Bellevue Hospital Medical College,</i>	<i>Poneto, Ind.</i>
George Henry Heald, M.D., <i>Cooper Medical College,</i>	<i>Battle Creek.</i>
John Sabert Mott, M.D.,	<i>Independence, Mo.</i>
Arthur Kimball Northrop, M.D., <i>Michigan College of Medicine and Surgery,</i>	<i>Detroit.</i>

FOURTH YEAR STUDENTS.

NAME.	RESIDENCE.
Otto Carl Ahlers,	<i>Bellevue, Ia.</i>
Susan Anderson,	<i>Anaconda, Col.</i>
Harry Brown Britton,	<i>Dayton, O.</i>
Alice Crawford Brown, A.B., <i>Vassar College,</i>	<i>Detroit.</i>
Hortense Valentine Bruce,	<i>Burnside.</i>
John Fletcher Byington, A.B.,	<i>Battle Creek.</i>
Mary Kate Byington,	<i>Battle Creek.</i>
Claudius Bidleman Chapin, B.S., <i>Michigan Agricultural College,</i>	<i>Schoolcraft.</i>
Albert Ambler Church, A.B., <i>Oberlin College,</i>	<i>Lansing.</i>
Abbott Lathrop Cooley,	<i>Ann Arbor.</i>
Arthur Samuel Cornell,	<i>West Flamboro, Ont.</i>

Galen Greenfield Crozier, B.S.,	<i>Ann Arbor.</i>
Mary Agnes Dangel,	<i>Fort Jones, Cal.</i>
Hester Sophia Antoinette Davies,	<i>Battle Creek.</i>
Joseph Trower Davies,	<i>Battle Creek.</i>
Herman Russell Dewey, Ph.M., <i>Hillsdale College,</i>	<i>Hillsdale.</i>
Stowell Barnard Dudley, Ph.B., <i>Oberlin College,</i>	<i>Oberlin, O.</i>
Penelope McNaughton Flett, A.B., <i>Vassar Coll.,</i>	<i>Waverley, Mass.</i>
Edward Samuel Fogg,	<i>Shiloh, N. J.</i>
Orrin Henry Freeland,	<i>Mason.</i>
Neil Alexander Gates,	<i>Ann Arbor.</i>
Charles B. Gauss,	<i>Palo.</i>
Ralph Nevin Gorden,	<i>Abilene, Kan.</i>
Albert Culver Hammett,	<i>Chicago, Ill.</i>
Charles William Hartloff, A.B., <i>Indiana Univ.,</i>	<i>Evansville, Ind.</i>
Edward Palestine Hawkins,	<i>Ann Arbor.</i>
Rudolph Bernhard Hoermann, A.B., <i>Northwest-</i>	
<i>ern University,</i>	<i>Watertown, Wis.</i>
George Aloysius Hofstetter,	<i>Saint Louis.</i>
Mary Myrtle Pennington Hunter,	<i>Battle Creek.</i>
Howard Aiken Ijams, B.S., <i>Univ. of Tennessee,</i>	<i>Knoxville, Tenn.</i>
Noah Harrison Jackson,	<i>Ann Arbor.</i>
Benjamin William Kelly,	<i>Saginaw, East Side.</i>
John Henry Kincaid,	<i>Knoxville, Tenn.</i>
James Rollin Kingsley,	<i>Milan.</i>
Lewis Frank Ladd,	<i>Brooklyn.</i>
David Herman Lando,	<i>Saint Paul, Minn.</i>
Frederick Percy Lawton,	<i>Lawton.</i>
Anna Willard Locke, A.B., <i>Wellesley College,</i>	<i>Nashua, N. H.</i>
Homer Garrison Long,	<i>Quaker City, O.</i>
William Beatty Lunn,	<i>Pontiac.</i>
Jessie Fremont Ruby McNeal, A.B.,	<i>Alvordton, O.</i>
John Albert Mapes, B.S., <i>Olivet College,</i>	<i>Olivet.</i>
Albert Beekman Mills,	<i>Port Huron.</i>
Morris Morrison,	<i>Westby, Wis.</i>
Frederick Lee Morse,	<i>Lyons.</i>
Hugh Mulheron,	<i>Detroit.</i>
Charles Chesterfield Nicola, B.S.,	<i>Battle Creek.</i>
Charles Hannibal Nims, A.B., <i>Oberlin College,</i>	<i>Sand Beach.</i>
Marion Nute,	<i>Boston, Mass. [does.</i>
George Drinan Perkins,	<i>Bridgetown, Barba-</i>
Carlin Phillips,	<i>Ann Arbor.</i>
Ferdinand Henry Pirnat,	<i>Evansville, Ind.</i>
George Hampton Putney,	<i>Ionia.</i>

Henry Christian Schoepfle,	<i>Sandusky, O.</i>
Raymond Duane Sleight,	<i>Laingsburg.</i>
Georgia Smeallie, B.L., B.S.,	<i>Independence, Ia.</i>
Paul Smits,	<i>Zeeland.</i>
William Albert Spitzley, A.B.,	<i>Detroit.</i>
Isaac Franklin Steiner,	<i>Lima, O.</i>
Willard Stiles Stevens,	<i>Evansville, Wis.</i>
John Benjamin Thielen,	<i>Gorham, N. Y.</i>
George Barclay Wallace,	<i>Portland, Ore.</i>
Harry Clark Watkins,	<i>Norvell.</i>
Arthur Eddy West,	<i>Eatón Rapids.</i>
Mary Wetmore,	<i>Allegan.</i>
Jean Calista Harris Whitney,	<i>Battle Creek.</i>
Edward Peyton Wilbur,	<i>Kalamazoo.</i>
Robert Dwight Wilson,	<i>Medway, Mass.</i>
William Henry Witter,	<i>Bucyrus, O.</i>
James Rupert Wolfenden, B.S.,	<i>Chicago, Ill.</i>
Carrie Jane Young,	<i>Parma.</i>

THIRD YEAR STUDENTS.

NAME.	RESIDENCE.
Helen Emelia Affeld,	<i>Chicago, Ill.</i>
John William Amessee,	<i>Lake Linden.</i>
William Richardson Bagley,	<i>Saint Charles, Ill.</i>
Howard Bigelow Baker, B.S., <i>Mich. Agr. Coll.,</i>	<i>Lansing.</i>
Fannie E. Barrett,	<i>Kalamazoo.</i>
Robert Barbour Bell,	<i>Ann Arbor.</i>
Samuel Robert Boyce, Ph.C.,	<i>Brooklyn.</i>
Howard Russell Bryson,	<i>Watsonstown, Pa.</i>
Minnie Burnham,	<i>Macomb, Ill.</i>
Thomas Stone Burr, A.B., <i>Bowdoin College,</i>	<i>Bangor, Me.</i>
Ellen Rose Canney,	<i>New Bedford, Mass.</i>
Eugene R. Carpenter,	<i>Knobnoster, Mo.</i>
Bert Mather Carr,	<i>Cheboygan.</i>
Charles Arthur Cattermole,	<i>Fort Madison, Ia.</i>
Loretta Katherine Cavanaugh,	<i>New Bedford, Mass.</i>
Edwin M. Chauncey,	<i>Girard.</i>
Charles Glenn Church,	<i>Marysville, O.</i>
Lewellyn Martha Cass Clinton,	<i>Saint Louis, Mo.</i>
Carrie Simpson Coleman,	<i>Centre, Ind.</i>
Clarendon James Combs,	<i>Elmira.</i>
Norton Dusenbury Coons,	<i>Mount Pleasant.</i>
Alexander Corpron,	<i>Strathroy, Ont.</i>

John Martin Craig,
 Kate Louise Crawford,
 Samuel Conway Crow,
 Thomas Levi Dagg,
 Charles Elbert Davis,
 Lydia Maria Adams DeWitt,
 Hugh William Dicken,
 Fred Strayer Diefendorf,
 Victor Charles Doherty,
 Myron LaFayette Downs, A.B.,
 Mary Victoria Dryden,
 Fannie Almara Dunn,
 George Charles Fisher,
 Arthur Ernest Gale,
 Henry Bennett Gammon, A.B.,
 Clarence Allen Good,
 Newton Henry Greenman,
 Ovidus Arthur Griffin, B.S., *Fayette Normal*
University,
 Fred Hopkins Harris,
 Corydon Ford Heard,
 Rhoda Grace Hendrick,
 Glenn Henley,
 Park Howell,
 Robert Stephenson Ingersoll,
 William S. Jackson,
 Andreas Johannes,
 Adelbiert Allen John,
 Joseph Alphonsis Kelly,
 LeRoy Wendell King,
 Mark Stevens Knapp, B.S.,
 Will Mac Lake,
 Solomon S. Lee,
 Wilmer Sanford Lehman,
 William James Little, A.B., *Hastings College,*
 George Munroe Livingston,
 Nelson Ferguson McClinton,
 Jesse Krekore Marden, A.B., *Dartmouth Col-*
lege,
 Willard Monfort,
 Harvey Lionel Morris,
 Joseph Robert Mountain,
 Mary Josephine Nachtrieb,

Battle Creek.
Ann Arbor.
Glenfield, Pa.
West Bay City.
Woodward, Okla.
Dexter.
Romeo.
Canajoharie, N. Y.
Clare.
Chicago, Ill.
Battle Creek.
Bismarck, N. Dak.
Centreville.
Haverhill, Mass.
Ann Arbor.
Richfield.
Decatur.

Fayette, O.
Coldwater.
North East, Pa.
Hamburg.
Fairmount, Ind.
Atlanta, Ga.
West Olive.
Muskegon.
Ann Arbor.
Battle Creek.
Ann Arbor.
Rome, N. Y.
Fenton.
Saginaw, East Side.
Lowell.
Edison, Neb.
Madison, Neb.
Cass City.
Alma.

New Boston, N. H.
Ithaca.
Vassar.
Saint Johns.
Nathrop, Col.

May Fonda Nadeau,	<i>Seattle, Wash.</i>
George Henry Norris,	<i>Port Huron.</i>
Albert Patrick O'Leary,	<i>Rutledge, Ore.</i>
Hiram Winnett Orr,	<i>West Newton, Pa.</i>
James Willis Parker, A.B.,	<i>Ann Arbor.</i>
Olive Grace Perry,	<i>Hillsdale.</i>
Ernest Reginald Pike,	<i>Abington, Conn.</i>
Arthur David Pollock,	<i>Macomb, Ill.</i>
Henry Bertram Potter,	<i>Providence, R. I.</i>
Albert Josiah Read,	<i>Battle Creek.</i>
Michael Joseph Rogers,	<i>Chicago, Ill.</i>
Joseph Crocket Scarborough,	<i>Ann Arbor.</i>
Henry Mortimer Senter,	<i>Houghton.</i>
Annie Margaret Stevens,	<i>Farmington, Me.</i>
Abraham Franklin Strickler,	<i>Ann Arbor.</i>
Archie Adelbert Swinton, B.S., <i>Olivet College,</i>	<i>Calumet.</i>
William Henry Tefft,	<i>Hastings.</i>
Sharon John Thoms,	<i>Three Rivers.</i>
Christian Van der Veen,	<i>Grand Rapids.</i>
Thomas Van Urk,	<i>Kalamazoo.</i>
Ernest Maxwell Vardon,	<i>Hillsdale.</i>
Clarence Godfrey Vary,	<i>Battle Creek.</i>
Silvio Henry Karl von Ruck,	<i>Asheville, N. C.</i>
Walter Miller Warren,	<i>Chateaugay, N. Y.</i>
Mary Blanche White,	<i>Chicago, Ill.</i>
Charles Henry Williams, Ph.B., <i>Adrian College,</i>	
Ph.C.,	<i>Adrian.</i>
Leroy John Wisman,	<i>Frontier.</i>
John Walter Wright,	<i>North Aurelius.</i>
John Oloff Zellen,	<i>Skaneec.</i>
Joseph Edward Ziliak,	<i>Haubstadt, Ind.</i>

The following student, enrolled in the Department of Literature, Science, and the Arts, is also pursuing studies as third year student in the Department of Medicine and Surgery.

NAME.	RESIDENCE.
Bruno Lyonel Schuster,	<i>Milwaukee, Wis.</i>

The following student, enrolled in the College of Dental Surgery, is also pursuing studies as third year student in the Department of Medicine and Surgery.

NAME.	RESIDENCE.
Harry Sanburn Holmes,	<i>Caribou, Me.</i>

SECOND YEAR STUDENTS.

NAME.	RESIDENCE.
Florence Elizabeth Allen,	<i>Rochester, N. Y.</i>
Miranda May Allen,	<i>Rochester, N. Y.</i>
Alfred Wickham Balsley,	<i>Findlay, O.</i>
Charles Wallace Bassett,	<i>Utica, N. Y.</i>
George Herschael Beach,	<i>Fargo, N. Dak.</i>
Lester Hayes Beals, A.B.,	<i>Grand Blanc.</i>
Lena Adell Benjamin,	<i>Bradford, Pa.</i>
Frank Eugene Bennett,	<i>Battle Creek.</i>
Harmon Edward Boice,	<i>Byron.</i>
Philip Daggett Bourland, B.S.,	<i>Peoria, Ill.</i>
Joel Packard Bradford,	<i>Battle Creek.</i>
Isabel Agnes Bradley,	<i>Akron, O.</i>
Joseph Brennemann, Ph.B.,	<i>Peru, Ill.</i>
Jeannette Marshall Brigham,	<i>Howell.</i>
Frederick William Brown, B.S., <i>Bucknell Univ.,</i>	<i>Franklin, Pa.</i>
Robert Clayton Buck,	<i>Saint Johns.</i>
John Everett Burnette,	<i>Putnam, Conn.</i>
Blanche Morton Butler,	<i>Ann Arbor.</i>
Leo Louis Cahill,	<i>Mendon.</i>
James Francis Canavan,	<i>Holyoke, Mass.</i>
Harry Franklin Carver,	<i>McEwensville, Pa.</i>
Daniel George Castell,	<i>Pontiac.</i>
Alfred Newton Chamberlin,	<i>Battle Creek.</i>
Oscar Elias Chase,	<i>Traverse City.</i>
Yung Peng Cheng,	<i>Canton, China.</i>
Clarence George Clark,	<i>Ann Arbor.</i>
Elliott Mason Clarke,	<i>Hope Valley, R. I.</i>
Henry Lee Cone,	<i>Ann Arbor.</i>
Mary Louise Cook,	<i>Boston, Mass.</i>
Solomon Macy Cowgill,	<i>Summitville, Ind.</i>
Charles Culver,	<i>Howell.</i>
William R. Cunningham,	<i>Grove City, Pa.</i>
Louisa Mary Dithridge,	<i>New York, N. Y.</i>
Arthur James Dresser, B.S., <i>Dartmouth College,</i>	<i>Hinsdale, Mass.</i>
Amos Driver,	<i>Carrollton, Ill.</i>
William Sylvio Durand,	<i>Champion.</i>
Omar J. East,	<i>Vandalia.</i>
Halle Laura Ewing,	<i>Louisville, Ky.</i>
David Fleischhauer,	<i>Reed City.</i>
Albert Douglas Foster,	<i>Detroit.</i>
Raynor Spalding Freund,	<i>Butte, Mon.</i>

John Edwin Froom,	<i>Ann Arbor.</i>
Stuart Eugene Galbraith, B.L.,	<i>Pontiac.</i>
Conrad Georg, A.B.,	<i>Ann Arbor.</i>
Milton Lowrie Glenn,	<i>Crawford Corners, Pa.</i>
Alfred George Goll,	<i>Stryker, O.</i>
James Gostanian,	<i>Campello, Mass.</i>
Frank Davis Gray,	<i>Boice, N. Y.</i>
George Frank Greenleaf, Jr.,	<i>Chicago, Ill.</i>
Robert McKay Greenshields,	<i>Romeo.</i>
Elmo Walter Griffin,	<i>Saginaw, East Side.</i>
William Page Harlow,	<i>Decatur.</i>
Downey Lamar Harris,	<i>Franklin, Ky.</i>
Otis Madison Hayward,	<i>Battle Creek.</i>
Irma Irene Heller,	<i>Fremont, Ind.</i>
Niles Hellesnaes,	<i>Voss, Norway.</i>
William Eugene Helm,	<i>Dundee, Ill.</i>
Levi St. John Hely,	<i>Borden, Cal.</i>
Louis Moffat Henderson,	<i>Saint Johns.</i>
Anna Mae Henry,	<i>Ann Arbor.</i>
Fannie Jae Henry,	<i>Ann Arbor.</i>
Arthur Gilbert Holbrook,	<i>Coldwater.</i>
Willard Hunter Hutchings, B.L.,	<i>Leslie.</i>
Arthur Dudley Jackson,	<i>Chicago, Ill.</i>
Susan Baxter Jarrett,	<i>Quincy, Ill.</i>
†John Joslyn Kelley,	<i>Sturgis.</i>
Orson Arza Kellogg,	<i>Alden, Ia.</i>
Herbert Elias Kelly,	<i>LaSalle.</i>
William Newton Kenzie,	<i>Battle Creek.</i>
John Victor Keogh,	<i>Dubuque, Ia.</i>
Clarence Rolla LaBier,	<i>Battle Creek.</i>
William Jordan Lakey,	<i>Chicago, Ill.</i>
Eugene Richards Lewis,	<i>Dubuque, Ia.</i>
Charles Loughnane,	<i>Lapeer.</i>
Cabot Lull, Jr.,	<i>Pontiac.</i>
Mary May McArthur,	<i>Cheboygan.</i>
Calvin Fenwick McDowell,	<i>Wesley, Pa.</i>
James William McEwan,	<i>Detroit.</i>
Mary Crouse McKibbin,	<i>McKeesport, Pa.</i>
Jackson Lee Martin,	<i>Battle Creek.</i>
Maude Ethelyn Burt Martin,	<i>Battle Creek.</i>
Elihu Arthur Martindale, Ph.B., <i>Hillsdale Coll.,</i>	<i>Ann Arbor.</i>
John Edward Mason,	<i>Chesterville, Ill.</i>
William Hampton Matchett,	<i>Ann Arbor.</i>

Clarence Warren Mehlhop,	<i>Dubuque, Ia.</i>
John Josiah Mersen, A.B., <i>Hope College,</i>	<i>Holland.</i>
George Farnsworth Mooney,	<i>Austinburg, O.</i>
Harry E. Moore,	<i>Ypsilanti.</i>
Thomas Kenney Moore,	<i>Ann Arbor.</i>
William Robert Morrison,	<i>Corunna, Ont.</i>
Martin Alvin Mortensen,	<i>Ann Arbor.</i>
William Daniel Mueller,	<i>Muskegon.</i>
Horace Newhart A.B., <i>Dartmouth College,</i>	<i>New Ulm, Minn.</i>
Gerda Ohlson,	<i>Engelholm, Sweden.</i>
Jesse Obed Parker,	<i>Mount Pleasant.</i>
Guy Payne,	<i>West Walworth, N. Y.</i>
Emma Pearson,	<i>Van Wert, O.</i>
Harvey Newton Peck, B.S., <i>Mich. Agr. Coll.,</i>	<i>Jackson.</i>
Samuel Wesley Perry,	<i>New Castle, Pa.</i>
Hiram Dewey Peterson,	<i>Huron, O.</i>
John Ross Petty,	<i>Fenton.</i>
Eben Douglas Pierce,	<i>Pickwick, Minn.</i>
Charles Banning Porter,	<i>Joliet, Ill.</i>
Dwight Centennial Powell,	<i>Logansport, Ind.</i>
Charles Ransom Reynolds,	<i>Elmira, N. Y.</i>
William Bernard Richmond,	<i>Ann Arbor.</i>
Elizabeth Pond Rindlaub,	<i>Platteville, Wis.</i>
Alexander Jan Schilstra,	<i>Kalamazoo.</i>
Samuel Schultz, Ph.B., <i>Albion College,</i>	<i>Lansing.</i>
Francis Albert Scott,	<i>Brown City.</i>
Joseph Pearle Seale,	<i>Fairmount, Ind.</i>
Harry Morgan Shultz,	<i>Logansport, Ind.</i>
Bert Granville Snow,	<i>Manistique.</i>
Alice Gray Snyder,	<i>Coshocton, O.</i>
Szymon Szudrawski,	<i>Warsaw, Russia.</i>
Clarence Wilbur Taylor,	<i>Duluth, Minn.</i>
Gay F. Tidyman,	<i>Waupun, Wis.</i>
Benjamin Rush Bradford Townsend,	<i>New Brighton, Pa.</i>
George Tupper, B.S.,	<i>Kaneville, Ill.</i>
John Layton Tuttle, Jr.,	<i>Clinton.</i>
Edward Camillo Van De Walker,	<i>Baldwin.</i>
Aart Van Westrienen,	<i>Grand Haven.</i>
Felicie von Autenried,	<i>New York, N. Y.</i>
William Douglas Ward,	<i>Rochester, N. Y.</i>
Frank Stanley Wasielewski,	<i>Bay City.</i>
Alanson Weeks,	<i>Allegan.</i>
William Isaac Whitaker,	<i>Chelsea.</i>

Reid A. White,	<i>Clark's Lake.</i>
Ross Chauncey Whitman, A.B.,	<i>Ann Arbor.</i>
William Carrell Wilkinson,	<i>Romeo.</i>
Alden Humphrey Williams,	<i>Ann Arbor.</i>
LeRoy Alvin Wilson,	<i>LaPorte, Ind.</i>
Mary Moore Wolfe, A.B., <i>Bucknell University,</i>	<i>Lewisburg, Pa.</i>
Charles Martin Wood,	<i>Martin's Ferry, O.</i>
John Edward Worden,	<i>Tacoma, Wash.</i>
Frederick Thompson Wright, A.B.,	<i>Jackson.</i>
Johnston Arthur Yeager,	<i>Archbold, O.</i>
George Frank Young,	<i>Paw Paw.</i>

The following students, enrolled in the Department of Literature, Science, and the Arts, are also pursuing studies as second year students in the Department of Medicine and Surgery.

NAME.	RESIDENCE.
Edgar Bates,	<i>Bear Lake.</i>
Robert Collyer Bourland,	<i>Peoria, Ill.</i>
Roy Bishop Canfield,	<i>Ann Arbor.</i>
George Ernest Frazer,	<i>Ann Arbor.</i>
Isadore Leon Hill,	<i>Detroit.</i>
Theodore Charles Lyster,	<i>Detroit.</i>
William August Mogk,	<i>Ann Arbor.</i>
William Gilbert Povey,	<i>Detroit.</i>
Floyd Hamilton Randall,	<i>West Bay City.</i>
Joseph Sill,	<i>Detroit.</i>
Wesley Ewing Taylor,	<i>Wheelersburg, O.</i>

The following students, enrolled in the College of Dental Surgery, are also pursuing studies as second year students in the Department of Medicine and Surgery.

NAME.	RESIDENCE.
Thomas Edward Carmody,	<i>Ozosso.</i>
Robert Norman Forbes,	<i>Centre Lisle, N. Y.</i>

FIRST YEAR STUDENTS.

NAME.	RESIDENCE.
Arthur Robert Adams,	<i>Peotone, Ill.</i>
Ernest Stuart Albee,	<i>Oshkosh, Wis.</i>
May Margaret McConnell Babcock,	<i>Warren, Pa.</i>
James Alexander Baird,	<i>Brucefield, Ont.</i>
Frank Edward Baker,	<i>Detroit.</i>
Harriet Virginia Baker,	<i>Greenwich, Conn.</i>

Carl Hardin Ballard,
James Hosea Barnebee,
Thomas Charles Barnhart,
Adelbert Nathan Bauder,
Emil Frederick Baur,
Hart Beyer,
Lester Abram Bodine,
James Gordon Bonine,
Alfred Born,
John Charles Bradfield,
Henry H. Brevoort,
William Paul Caffey,
Earl Henry Campbell,
Homer Stephen Carr,
William Asbury Chapman,
Sara Thomasina Chase,
Alice Maud Mary Chesley,
Roy William Chivers,
Dwight Freeman Clark,
George Wentworth Clark,
Ellen Frances Cleaves,
Helen Taft Cleaves,
Henry Walker Clouche,
Caroline Colver,
Herbert Roy Conklin,
George Conrad,
Clifton Able Cooper,
Wilbur Henry Cooper,
William Albertus Coventry,
Andrew Linn Coyle,
Charles V. Craft,
Ernest Crockett,
Harriet Phebe Cutter,
Walter den Bleyker,
Elvia Clair Derickson,
Harold Medoris Doolittle,
Fred Grant Dryden,
James Arthur Durrent,
Joel Alpha Eastman,
Samuel Reed Eaton,
Charles Wesley Edmunds,
Thomas Flournoy,
John Harvey Foster,

Estherville, Ia.
Mendon.
Estherville, Ia.
Fort Plain, N. Y.
Manistee.
Orange City, Ia.
Clarence, N. Y.
Niles.
Lafayette, Ind.
Grand Rapids.
Lodi, N. J.
Decatur, Ga.
Schoolcraft.
Winchendon, Mass.
Wilkes Barre, Pa.
Otsego.
Exeter, N. H.
Jackson.
Indianapolis, Ind.
Toledo, O.
Ann Arbor.
West Gouldsboro, Me.
Michigan City, Ind.
Ann Arbor.
Tecumseh.
Buchanan.
Racine, Wis.
Knoxville, O.
Duluth, Minn.
Bloomfield, N. J.
Ann Arbor.
Dorset, O.
Utica, N. Y.
Kalamazoo.
Battle Creek.
Elyria, O.
Aledo, Ill.
Dickinson, N. Dak.
Imlay City.
Battle Creek.
Ann Arbor.
Clinton, Ia.
Woodruff, Ind.

Walter Eugene Foster,	<i>Elgin, Ill.</i>
Marie Frahm,	<i>Tuscola, Ill.</i>
Jed Burt Freund,	<i>Butte, Mon.</i>
James Thomas Grace,	<i>Bay City.</i>
Mary Emily Green,	<i>Charlotte.</i>
Robert Blake Griffith,	<i>Council Bluffs, Ia.</i>
†Hugh Thomas Gundry,	<i>Grand Blanc.</i>
Benjamin Franklin Hambleton,	<i>North Benton, O.</i>
George Tryon Harding, Jr.,	<i>Marion, O.</i>
William David Harris,	<i>Kalamazoo.</i>
James Henry, Jr.,	<i>Grand Rapids.</i>
Emil King Herig,	<i>Saginaw, West Side.</i>
Wiley DeBarr Hickey,	<i>Leipsic, O.</i>
Martin Luther Hindley,	<i>Norwalk, O.</i>
Theodore August Hoch,	<i>Michigan City, Ind.</i>
Bernard Hoerman,	<i>Watertown, Wis.</i>
Frank Holdsworth,	<i>Traverse City.</i>
Maria Kirby Hopkins,	<i>Castile, N. Y.</i>
George Austin Howlett,	<i>Lyndon.</i>
Anne May Ikeler,	<i>Three Rivers.</i>
Archie Lyvett Isbell,	<i>Schoolcraft.</i>
William Saunders Jesseph,	<i>Sand Lake.</i>
Kate McClure Johnson, Ph.B., <i>Univ. of Wooster,</i>	<i>Wooster, O.</i>
Ralph Kenney Johnson,	<i>Ludington.</i>
John Franklin Jordan,	<i>Haverhill, Mass.</i>
Christ William Kanne,	<i>Waterville, Minn.</i>
Luke Harry Kelly,	<i>Grand Rapids.</i>
Minta Proctor Kemp,	<i>Sault Ste. Marie.</i>
†William Webster Kimmel,	<i>Kendallville, Ind.</i>
Richard Lionel King,	<i>Peterboro, Ont.</i>
Aaron Floyd Kingsley,	<i>Leonidas.</i>
Alonzo Blackburn Kirk,	<i>Manistique.</i>
Patrick Lahey,	<i>Sault Ste. Marie.</i>
Theron Sparhawk Langford,	<i>Williamston.</i>
John Abram Kilbourn Lapp,	<i>Clarence, N. Y.</i>
James Thomas Lawless, Jr.,	<i>Toledo, O.</i>
Carl Hayes Lund, A.B., <i>Marietta College,</i>	<i>Marietta, O.</i>
Francis McMurray,	<i>Fitchburg, Mass.</i>
Harry McNeal, B.L.,	<i>Alvordton, O.</i>
Ernest Henry Madajesky, Ph.G., <i>University of</i>	
<i>Wisconsin,</i>	<i>Ironwood.</i>
Reynolds Cornelius Mahaney,	<i>Ann Arbor.</i>
Ada Malick,	<i>Neptune, O.</i>

Jay Elmer Mallette,	<i>Grand Rapids.</i>
Philip Emanuel Marsh,	<i>Ann Arbor.</i>
Adelbert Wesley Martin,	<i>Vicksburg.</i>
Ernest Martin,	<i>Saginaw, East Side.</i>
Harry Philson Mason,	<i>Wilton Junction, Ia.</i>
James Acker Mattison, A.B., <i>Univ. of Nashville,</i>	<i>McCormick, S. C.</i>
Clair G. Merse-roll,	<i>Jackson.</i>
John Arthur Miller, A.B., <i>Williams College,</i>	<i>Portsmouth, Va.</i>
Lewis Anning Moore,	<i>Kewanee, Ill.</i>
John Harris Foster Mullett, B.S., <i>Mich. Agr. Coll.,</i>	<i>Cassopolis.</i>
M.D.C., <i>Chicago Veterinary College,</i>	<i>Fort Dodge, Ia.</i>
Charles Henneberry Mulroney,	<i>Dowagiac.</i>
John Frank Murphy,	<i>Ann Arbor.</i>
†Frank Wesley Nagler, B.S.,	<i>Ann Arbor.</i>
Andrew Nelson,	<i>Wellsburg, W. Va.</i>
Joseph Belle Palmer,	<i>Marquette.</i>
Ralph Fleetwood Palmer,	<i>Grand Rapids.</i>
Charles Mason Parker,	<i>Ann Arbor.</i>
Herbert Edmund Peckham, A.B.,	<i>Richmond, Va.</i>
Harry Fletcher Pierce,	<i>Jackson.</i>
Fred John Pratt, Jr.,	<i>Ionia.</i>
George Raymond Pray,	<i>Kalamazoo.</i>
Julia Kimball Qua,	<i>Manistee.</i>
Lewis Stanton Ramsdell,	<i>Bessemer.</i>
Leo Robert Redner,	<i>Hazelhurst, Pa.</i>
James Richard Richards,	<i>Boonville, N. Y.</i>
Francis Cutter Rinkle,	<i>Baker's Crossing, O.</i>
Albert Rowland, Ph.C., <i>Ada University,</i>	<i>Sarnia, Ont.</i>
Robert David Scott,	<i>Grand Rapids.</i>
Walter Humphreys Shelby,	<i>Constantine.</i>
Leal Kenny Slote,	<i>Hillsdale.</i>
Shirley Holmes Smith, Ph.B., <i>Hillsdale College,</i>	<i>Council Bluffs, Ia.</i>
John Stoddard,	<i>Toledo, O.</i>
Pringle George Tait,	<i>Winchendon, Mass.</i>
Erwin Hartwell Taylor,	<i>North Benton, O.</i>
Walter Shafer Taylor,	<i>National Military Home, O.</i>
Wilfred Jerold Taylor,	<i>Wyandotte.</i>
Griffith Arthur Thomas,	<i>Viroqua, Wis.</i>
Carl Lawrence Thorsgaard, A.B., <i>Luther Coll.,</i>	<i>Kalamazoo.</i>
Lawrence Northcote Upjohn,	<i>Cooperstown, Pa.</i>
Bert Ketchum Van Naten,	<i>Chicago, Ill.</i>
Harry Scott Vernon,	<i>Lima, O.</i>
Edward George Weadock,	

Albert Merrill Webster,	<i>Elyria, O.</i>
Charles Wetherbee,	<i>Tones.</i>
William Wilke,	<i>Petoskey.</i>
Frank Clarence Witter,	<i>Lawrence.</i>
Ernest Llewellyn Wrentmore,	<i>Solon, O.</i>
Charles Seaman Young,	<i>Grand Rapids.</i>
Walfred Archimedes Zellen,	<i>Skaneec.</i>

The following students, enrolled in the Department of Literature, Science, and the Arts, are also pursuing studies as first year students in the Department of Medicine and Surgery.

NAME.	RESIDENCE.
Ray Haddock Burrell,	<i>Ann Arbor.</i>
George Darwin Jennings,	<i>Tonica, Ill.</i>
Demeter Kalenoff,	<i>Ann Arbor.</i>
George Bruckner Lowrie,	<i>Detroit.</i>
James Leo Lynch,	<i>Wiscoy, Minn.</i>
William Wilmon Newcomb,	<i>Detroit.</i>
Albert Noordewier,	<i>Jenison.</i>
Paul Monroe Pilcher,	<i>Brooklyn, N. Y.</i>
Russell Sturgis Rowland,	<i>Grand Rapids.</i>
Andrew Lester Swinton,	<i>Calumet.</i>
Charles Ernest Tompkins,	<i>Benton Harbor.</i>
George Augustus Woodruff,	<i>Benton Harbor.</i>

The following students enrolled in the School of Pharmacy, are also pursuing studies as first year students in the Department of Medicine and Surgery.

NAME.	RESIDENCE.
Walter Briggs Cady, Ph.C.,	<i>Ann Arbor.</i>
Walter Adams Nivling,	<i>Sioux City, Ia.</i>

Department of Law.

FACULTY.

JAMES B. ANGELL, LL.D., *President*.
LEVI T. GRIFFIN, A.M.
BRADLEY M. THOMPSON, M.S., LL.B.
JEROME C. KNOWLTON, A.B., LL.B.
FLOYD R. MECHEM, A.M.
THOMAS C. TRUEBLOOD, A.M.
ALEXIS C. ANGELL, A.B., LL.B.
OTTO KIRCHNER, A.M.
- HARRY B. HUTCHINS, PH.B., *Dean*.
/ THOMAS A. BOGLE, LL.B.
/ HORACE L. WILGUS, M.S.
- ELIAS F. JOHNSON, B.S., LL.M., *Secretary*.
JOHN W. DWYER, LL.M.
THOMAS W. HUGHES, LL.M.

THOMAS M. COOLEY, LL.D.,
Lecturer on the Law of Interstate Commerce.
JAMES L. HIGH, LL.D.,
Non-Resident Lecturer on Injunctions and Receivers.
JOHN B. CLAYBERG, LL.B.,
Non-Resident Lecturer on Mining Law.
VICTOR C. VAUGHAN, PH.D., SC.D., M.D.,
Lecturer on Toxicology in its Legal Relations.
MELVILLE M. BIGELOW, PH.D.,
Non-Resident Lecturer on Insurance.
HENRY C. ADAMS, PH.D.,
Lecturer on the Railroad Problem.
ANDREW C. McLAUGHLIN, A.M., LL.B.,
Lecturer on Constitutional Law and Constitutional History.
RICHARD HUDSON, A.M.,
Lecturer on Comparative Constitutional Law.

HENRY H. SWAN, A.M.,
Non-Resident Lecturer on Admiralty Law.
 CLARENCE L. MEADER, A.B.,
Lecturer on Roman Law.
 FRANK F. REED, A.B.,
Non-Resident Lecturer on Copyright Law.
 ALBERT H. WALKER, LL.B.,
Non-Resident Lecturer on Patent Law.

STUDENTS.

RESIDENT GRADUATES.

NAME.	RESIDENCE.
Robert Meador Barnett, LL.B.,	<i>Ann Arbor.</i>
Octavia Williams Bates, LL.B.,	<i>Detroit.</i>
Orien S. Cross, LL.B.,	<i>Paw Paw.</i>
George Patterson Kelly, LL.B.,	<i>Santa Ana, Cal.</i>
John Marr O'Connor, LL.B.,	<i>Detroit.</i>
Edgar Paul O'Leary, LL.B.,	<i>Ann Arbor.</i>
Bradshaw Hall Swales, LL.B.,	<i>Detroit.</i>
Giovanni Raphael Frank Villa, B.L., <i>Whitman</i>	
College, LL.B.,	<i>Walla Walla, Wash.</i>
Henry Milton Wallace, LL.B.,	<i>Hartland.</i>
†James Augustine Welsh, LL.B.,	<i>Shamokin, Pa.</i>
Guy Voorhees Williams, LL.B.,	<i>Portsmouth, O.</i>

THIRD YEAR STUDENTS.

NAME	RESIDENCE.
Charles Francis Abbott, A.B., <i>Dartmouth Col-</i>	
<i>lege,</i>	<i>West Gardner, Mass.</i>
Charles Stewart Abbott,	<i>Ann Arbor.</i>
Clarence William Aird, LL.B., <i>Detroit College</i>	
<i>of Law,</i>	<i>Detroit.</i>
Max Wellington Babb, A.B., <i>Iowa Wesleyan</i>	
<i>University,</i>	<i>Mount Pleasant, Ia.</i>
Grant Charles Bagley,	<i>Provo City, Utah.</i>
James Franklin Bailey, LL.B., <i>Northern Indiana</i>	
<i>College of Law,</i>	<i>Salversville, Ky.</i>
August Hostetter Baer, LL.B., <i>McKendree Col-</i>	
<i>lege,</i>	<i>Belleville, Ill.</i>
Charles Longhead Bartlett,	<i>Battle Creek.</i>
Thomas Albert Berkebile,	<i>Kansas City, Mo.</i>

Frank William Boss,	<i>Plymouth, Ind.</i>
Chester Groves Browne,	<i>Anderson, Ind.</i>
Walter Marion Chandler,	<i>Dallas, Tex.</i>
Roy Roscoe Coombs,	<i>Defiance, O.</i>
Herbert Allan Dancer, B.L.,	<i>Ann Arbor.</i>
Luther Ferguson Donahey,	<i>Napoleon, O.</i>
Thomas Jesse Drumheller,	<i>Walla Walla, Wash.</i>
Freeman Field,	<i>Detroit.</i>
Delbert E. Ford,	<i>Chicago, Ill.</i>
Robert M. Fouts, B.S., <i>Ohio Wesleyan Univ.</i> ,	<i>Troy, O.</i>
Frank Forest Freeman, LL.B., <i>Oregon Univ.</i> ,	<i>Portland, Ore.</i>
Harry Yershelle Freedman, LL.B., <i>Oregon Univ.</i> ,	<i>Portland, Ore.</i>
Albert John Galen, LL.B., <i>Notre Dame Univ.</i> ,	<i>Helena, Mont.</i>
Ransom Gardner George, A.B.,	<i>Ypsilanti.</i>
James Sumner Handy, A.B.,	<i>Ann Arbor.</i>
David N. Harper,	<i>Milford.</i>
George Blair Harrison,	<i>Topeka, Kan.</i>
William Lincoln Hart,	<i>Inverness, O.</i>
Henry Nephi Hayes,	<i>Richfield, Utah.</i>
Charles Wilford Hills,	<i>Ann Arbor.</i>
Albert Kocourek,	<i>Columbus, Ind.</i>
Charles Thomas Lawton,	<i>Ypsilanti.</i>
William Morris Long, B.S., <i>Adrian Coll.</i> ,	<i>Ann Arbor.</i>
Arthur William Lux,	<i>Lovington, Ill.</i>
Harry Albertus Miller,	<i>Dowagiac.</i>
Charles Martin Milroy, B.S., <i>Ohio Normal Univ.</i> ,	<i>Bellefontaine, O.</i>
Karl Roswell Miner,	<i>Ann Arbor.</i>
Charles Leroy Moore,	<i>Sparta, Ill.</i>
James Timothy Norris,	<i>Watertown, Wis.</i>
Jesse Francis Orton, A.B., A.M., <i>Cornell Univ.</i> ,	<i>Ann Arbor.</i>
William Henry Padley,	<i>Howell.</i>
Bayard Tamannund Riley,	<i>Paola, Kan. [Mexico.</i>
Albert Thomas Rogers, Jr.,	<i>East Las Vegas, New</i>
Emmett Chauncey Ryan, Ph.B., <i>Scio College</i> ,	<i>New Cumberland, O.</i>
Duane Charles Salisbury,	<i>Ann Arbor.</i>
Claud Ebenezzer Sheldon, Ph.B., <i>Hiram College</i> ,	<i>Windham, O.</i>
Frederick B. Stanley, A.B., <i>Earlham College</i> ,	<i>Lawrence, Kan.</i>
Clare Hart Stearns,	<i>Kalamazoo.</i>
Archibald Stevenson, B.S., <i>Purdue Univ.</i> ,	<i>Rockport, Ind.</i>
Edward Francis Wehrle, Ph.B., <i>University of</i>	
<i>Iowa,</i>	<i>Mount Pleasant, Ia.</i>
Charles Ezra White,	<i>Niles.</i>
Roy Hughes Williams,	<i>Milan, O.</i>

SECOND YEAR STUDENTS.

NAME.	RESIDENCE.
Merrie Hoover Abbott,	<i>Ann Arbor.</i>
Earl Belmont Adams,	<i>Decatur, Ind.</i>
John Qunicy Adams, B.L.,	<i>Ann Arbor.</i>
Harvey Francis Ake, B.S., <i>Mount Union Coll.,</i>	<i>Mapleton, O.</i>
Paul Young Albright,	<i>Philadelphia, Pa.</i>
Louis Carl Anderson,	<i>Plainville.</i>
Duane Darrow Arnold,	<i>Three Rivers.</i>
Alatan Leonard Charles Atkinson,	<i>Honolulu, H. I.</i>
Elisha Avery Baker,	<i>Clayton.</i>
George Edward Ball,	<i>Marquette.</i>
Michael John Barry,	<i>Cheyenne, Wyo.</i>
Edwin Southworth Bartlett,	<i>Brockton, Mass.</i>
George Herbert Batcheler,	<i>Buchanan.</i>
James J. Bell, Jr.,	<i>Shenandoah, Pa.</i>
Berdel Dixon Bishop,	<i>Benton Harbor.</i>
William Romine Blackburn,	<i>Danville, Ill.</i>
Jacob Moore Blake,	<i>Spokane, Wash.</i>
Ozro Seth Blanchard,	<i>Council Bluffs, Ia.</i>
Peter Jacob Blosser,	<i>Slate Mills, O.</i>
Henry Herman Bodenshtab,	<i>Milwaukee, Wis.</i>
Clayton Sweet Boice,	<i>Decorah, Ia.</i>
Ralph Raymond Bowdle,	<i>Mitchell, S. Dak.</i>
C. Asbury Boyd,	<i>Marshall, Ark.</i>
James Roy Boyd,	<i>LaPorte, Ind.</i>
Elihu Harry Boynton,	<i>Saint Clair.</i>
Samuel Braudy,	<i>Grand Rapids.</i>
George Clement Brown, A.B., <i>Northern Indiana</i>	
<i>University,</i>	<i>Dennison.</i>
Leo LaSalle Brunhild,	<i>Chicago, Ill.</i>
Edmund David Burke,	<i>Buffalo, Ill.</i>
Edward Ernest Burkhardt,	<i>Sidney, O.</i>
Francis Marion Byam,	<i>Manistee.</i>
Grace Hayne Carleton,	<i>Sault Ste. Marie.</i>
Charles Austin Carter,	<i>Detroit.</i>
James Henry Casselman,	<i>Ames, Ia.</i>
Frank Whitmore Chadbourne,	<i>Fond du Lac, Wis.</i>
James Franklin Charles,	<i>Marion, Ind.</i>
James Ferson Clark,	<i>Rantoul, Ill.</i>
Harold Augustus Clarke,	<i>San Francisco, Cal.</i>
Augustine Francis Connolly,	<i>Wakeman, O.</i>
Arthur Melvin Cox, A.B., <i>State Coll. of Kentucky,</i>	<i>Cynthiana, Ky.</i>

Arnold Lyman Davis, A.B., <i>Univ. of S. Dakota,</i>	<i>Watertown, S. Dak.</i>
Hugo Edgar Dieterichs,	<i>Saint Louis, Mo.</i>
Mortimer Adolph Dittenhoefer,	<i>Mansfield, O.</i>
Arthur Wood Dunn,	<i>Hiawatha, Kan.</i>
Alonzo Jay Edgerton, Jr.,	<i>Sioux Falls, S. Dak.</i>
Thomas Edwards, Jr.,	<i>Grand Rapids.</i>
Emanuel Philip Eirich,	<i>Marysville, O.</i>
Charles Englehard,	<i>David City, Neb.</i>
A. Burdette Evans,	<i>Detroit.</i>
William Henry Feindt, Jr.,	<i>Chicago, Ill.</i>
George Nicholas Fell,	<i>Toledo, O.</i>
George Calvin Finrock,	<i>Detroit.</i>
George Forest Firestone,	<i>Akron, O.</i>
Fred Fischer, B.S., <i>Western Normal College,</i>	<i>Shenandoah, Ia.</i>
Daniel Webster Fishell,	<i>Chicago, Ill.</i>
Louis Jesse Fletcher,	<i>Sugar Grove, Ill.</i>
William Merrick Forsyth,	<i>Ann Arbor.</i>
Christopher C. Fouch, Jr.,	<i>Gladwin.</i>
George Roy Fox,	<i>Bay City.</i>
Frederick Joseph French,	<i>Union City.</i>
Eugene Paul Gailey,	<i>Ashland, Ill.</i>
Eugene L. Geismer,	<i>Ann Arbor.</i>
Thomas Henry George,	<i>Port Huron.</i>
Edward Ellis Gilbert,	<i>Boyne Falls.</i>
Harry Ralph Goldman,	<i>Rockford, Ill.</i>
Luman Webster Goodenough, B.L.,	<i>Ludington.</i>
Edwin Howard Gordon, A.B., <i>Macalister Coll.,</i>	<i>Tyner, N. Dak.</i>
George Budd Gould,	<i>Aspen, Col.</i>
Ziba Kent Graham,	<i>Detroit.</i>
Fred Warren Green,	<i>Ypsilanti.</i>
Charles Edward Greenwald,	<i>Whiting, Ind.</i>
Boone Gross,	<i>Chicago, Ill.</i>
Eugene Edgar Grumbine,	<i>Chicago, Ill.</i>
Ephraim Hanson,	<i>Ephraim, Utah.</i>
George Roscoe Harper,	<i>Goshen, Ind.</i>
Hugh Huse Hart,	<i>Saint Clair.</i>
Samuel Brush Haskin, A.M. <i>Baker University,</i>	<i>Lenexa, Kan.</i>
Lewis Hunter Hays,	<i>Peoria, Ill.</i>
Robert Healy,	<i>Fort Dodge, Ia.</i>
Howard Erb Heckler,	<i>Philadelphia, Pa.</i>
William Briggs Hice,	<i>New Albany, Ind.</i>
William Boughton Hile,	<i>Ransom.</i>
James Henry Hill,	<i>Edinburg, Ill.</i>

Rupert Holland,	<i>Siney, O.</i>
William Andrew Holzheimer,	<i>Saginaw, East Side.</i>
William Truman Hosner,	<i>Romeo.</i>
Eugene Patrick Hourihane,	<i>Arroyo Grande, Cal.</i>
Hobart Birney Hoyt, A.B.,	<i>Grand Rapids.</i>
Otis Huff,	<i>Volinia.</i>
Walter Guthrie Hurd,	<i>Dubuque, Ia.</i>
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Edward Franklin Irwin,	<i>Pleasant Plains, Ill.</i>
Theo T. Jacobs,	<i>Sturgis.</i>
Benjamin Jacobson,	<i>Detroit.</i>
James Daly Jerome,	<i>Detroit.</i>
Robert Nelson Johnson,	<i>Fort Madison, Ia.</i>
Charles Carroll Jones,	<i>Ironwood.</i>
George William Jones, Jr.,	<i>Allegheny, Pa.</i>
William Kaspar, Jr.,	<i>Chicago, Ill.</i>
Cornelius Francis Kelley,	<i>Butte, Mon.</i>
Alfred Silverthorn Kepner,	<i>Chicago, Ill.</i>
William Thomas Kidd,	<i>Ann Arbor.</i>
William Duncan Kilpatrick,	<i>Owosso.</i>
Isaac Newton Kinney,	<i>West Bay City.</i>
George Kingsley, Jr.,	<i>Paola, Kan.</i>
Benjamin Volcan Kohort,	<i>Wilber, Neb.</i>
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<i>lege of Law,</i>	<i>Nirvana.</i>
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James Oliver Laing,	<i>Leavenworth, Kan.</i>
Walter Napoleon Langell,	<i>Saint Clair.</i>
James Thomas Lawler,	<i>Bay City.</i>
Louis Lee Legg,	<i>Doddsville, Ill.</i>
Charles Clinton Lones, Ph.B., <i>Mount Union Coll.,</i>	<i>Park, O.</i>
Oliver Allen Ludlow,	<i>LaPorte, Ind.</i>
Andrew J. Lynd,	<i>Saginaw, East Side.</i>
Thomas Edward McBride,	<i>Duluth, Minn.</i>
George Percy McCallum,	<i>Thompson.</i>
William Sterling McCluskey,	<i>Glenwood, Ia.</i>
Glenn Sharp Mack,	<i>Madison.</i>
Gifford Brown McKay,	<i>Saginaw, East Side.</i>
Arthur Horace McLain,	<i>Cando, N. Dak.</i>
Lester Elmer Maher,	<i>Chicago, Ill.</i>
William Henry Martin,	<i>Saginaw, East Side.</i>
Frank Gray Mason,	<i>Emporia, Kan.</i>

Thomas Gilbert Mays,	<i>Ann Arbor.</i>
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Harry J. Mercer,	<i>Ventura, Cal.</i>
Conrad Miller,	<i>McKeesport, Pa.</i>
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Wade Millis,	<i>Addison.</i>
George Arthur Mitchell,	<i>York.</i>
Herbert Allen Moore,	<i>Elmira.</i>
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Samuel Frederick Nichols,	<i>Beatrice, Neb.</i>
John Henry Notley,	<i>Vicksburg.</i>
Charles Jerry O'Connor,	<i>Greenville, O.</i>
Patrick Henry O'Donnell,	<i>Belvidere, Ill.</i>
Charles Mark Owen,	<i>Newark, O.</i>
Walter Ewing Oxtoby,	<i>Ionia.</i>
Lawrence Shearman Page,	<i>Marshall.</i>
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Allen Brooks Parker,	<i>West Acton, Mass.</i>
Earl Peters,	<i>Pleasanton, Ia.</i>
Matthias Bovee Pittman, Jr.,	<i>Boscobel, Wis.</i>
Ralph Prime Pooley,	<i>Toledo, O.</i>
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Rufus Percival Ranney,	<i>Cleveland, O.</i>
Alexander McCall Rea,	<i>Ann Arbor.</i>
John Francis Rice,	<i>Stevens Point, Wis.</i>
Samuel Gayle Riley, A.B., <i>Princeton University,</i>	<i>Georgetown, Ky.</i>
George Delbert Robbins, B.S., <i>Knox College,</i>	<i>Galesburg, Ill.</i>
Frank Prather Sadler, A.B.,	<i>Grove City, Ill.</i>
J. Sterling St. John, B.L.,	<i>Ann Arbor.</i>
Frank R. Sanders,	<i>Buchanan.</i>
Thomas Philip Schmidt,	<i>Cleveland, O.</i>
Otto John Schultz,	<i>Chicago, Ill.</i>
Wallace Dutton Scott,	<i>Detroit.</i>
Linn Walker Searles,	<i>Ann Arbor.</i>
William Adam Seegmiller,	<i>Petoskey.</i>
Jeremiah Timothy Shea,	<i>Lostant, Ill.</i>
Edwin Rucker Sheetz,	<i>Chillicothe, Mo.</i>
Samuel Leroy Sheetz,	<i>Chillicothe, Mo.</i>
Dwight Cutler Sheldon,	<i>Grand Haven.</i>
Howard Ion Shepherd,	<i>Charlotte.</i>

Truman William Shields,	<i>Saunemin, Ill.</i>
David Emanuel Sites,	<i>Lancaster, O.</i>
Harry Bowne Skillman,	<i>South Bend, Ind.</i>
Errol Henry Spicer,	<i>Detroit.</i>
Francis Edward Stevens,	<i>Columbus, Ind.</i>
Edwin James Stinemeyer,	<i>Canon City, Col.</i>
Frederick William Stolz,	<i>Saginaw, East Side.</i>
Carl Theodore Storm,	<i>Kirksville, Mo.</i>
William Ellis Stowe,	<i>Omaha, Neb.</i>
George Louis Sutter,	<i>Beaver Falls, Pa.</i>
Frederick A. Sweet,	<i>Dorrance, Kan.</i>
Edward Thomas Taggart,	<i>Portland, Ore.</i>
Stewart Lawrence Tatum,	<i>Denver, Col.</i>
Charles Edward Theobald,	<i>Pittsburgh, Pa.</i>
Edward Joseph Tisdale,	<i>Tilbury, Ont.</i>
Lewis Leverne Thompson,	<i>Alleghen.</i>
Wellington Samuel Towner,	<i>Elgin, Ill.</i>
Dwight Joseph Turner,	<i>Bay City.</i>
Robert Bradford Upham,	<i>Chicago, Ill.</i>
August John Waffan,	<i>Iron Mountain.</i>
Thomas John Weadock,	<i>Bay City.</i>
Rufus Lee Weaver, B.S., <i>State College of Ken-</i>	<i>Frazer, Ky.</i>
<i>tucky,</i>	<i>Carthage, Mo.</i>
Perry Webster,	<i>Friendship, N. Y.</i>
Wellington Jay Wetherbee,	<i>Newberry.</i>
Archie King Wheeler,	<i>Saint Clair.</i>
John Palmer Whiting,	<i>Lebanon, Ore.</i>
George Henry Wilkes,	<i>Napa, Cal.</i>
John Llewellyn Willoughby,	<i>Detroit.</i>
Ralph Emerson Wisner,	<i>Freeport, Ill.</i>
Orestes Humphrey Wright,	<i>Toledo, O.</i>
Wesley John Wuerfel,	<i>Henderson, Ky.</i>
Harvey Yeaman,	<i>Marshallton, Pa.</i>
Edward William Young,	

FIRST YEAR STUDENTS.

NAME.	RESIDENCE.
Basil Burgess Adams,	<i>Spokane, Utah.</i>
Robert Sumner Albee, B.S.,	<i>Oshkosh, Wis.</i>
Adelbert M. Alderson,	<i>Livingston, Mon.</i>
George Hiram Allen,	<i>Seattle, Wash.</i>
John Curtis Ammerman,	<i>Moline, Ill.</i>
Charles James Anderson,	<i>LeRoy, N. Y.</i>

Clifford Burnham Anderson,	<i>Portsmouth, O.</i>
Ray Nelson Anderson,	<i>Summer Hill, Ill.</i>
Arthur Gilbert Andrews, C.E., <i>Norwich Univ.</i> ,	<i>Northfield, Vt.</i>
John Arbenz, Jr., A.B., <i>West Virginia University</i> ,	<i>Wheeling, W. Va.</i>
Larson Harvey Arends,	<i>Syracuse, Neb.</i>
Louis William Arnett,	<i>Nicholasville, Ky.</i>
Henry Clarence Austill,	<i>Elwood, Ind.</i>
Benjamin Miller Austin,	<i>Kalamazoo.</i>
Oscar Otto Bader,	<i>New Albany, Ind.</i>
Verne Wade Badgley,	<i>Jackson.</i>
James Alfred Bardin,	<i>Salinas, Cal.</i>
Albert Raymond Barnes,	<i>Kalamazoo.</i>
Joseph Martin Barr,	<i>Joliet, Ill.</i>
Charles Sumner Beardsley,	<i>Kalamazoo.</i>
Wilfred Temple Bell,	<i>Marathon, Ia.</i>
Chester Leigh Benedict,	<i>Port Huron.</i>
Warren Berkey,	<i>Goshen, Ind.</i>
Estal George Bielby,	<i>Sunman, Ind.</i>
Guy Masson Bixby,	<i>Saint Louis, Mo.</i>
Edmund Shepard Black,	<i>Yale.</i>
John Alexander Blair,	<i>New Alexandria, Pa.</i>
Frederic Henry Bowers,	<i>Edon, O.</i>
Harold Martin Bowman,	<i>Des Moines, Ia.</i>
Samuel Evan Boys, A.B., <i>Albion College</i> ,	<i>Albion.</i>
Armin William Brand,	<i>Chicago, Ill.</i>
George Corrington Brainerd,	<i>Grafton, Ill.</i>
Earl Van Dorn Brown, A.B., <i>Kansas Wesleyan</i>	
<i>University</i> ,	<i>Concordia, Kan.</i>
Frank William Brown,	<i>Wakarusa, Ind.</i>
Vernelle Freeland Browne,	<i>Chicago, Ill.</i>
William Alexander Bryans, Jr.,	<i>Turtle Creek, Pa.</i>
Milton G. Bryant,	<i>Hudson.</i>
Charles Mumford Bush,	<i>Kansas City, Mo.</i>
William Henry Caley,	<i>Littleton, Col.</i>
John Brownfield Campbell,	<i>South Bend, Ind.</i>
José Tomas Canales,	<i>Alice, Tex.</i>
Joseph Knight Carey,	<i>Darlington, Wis.</i>
John Andrew Cashel,	<i>Arcadia, Wis.</i>
Edward Henry Cassey,	<i>Detroit.</i>
Henry Catrow,	<i>Miamisburg, O.</i>
Arthur Francis Chapman,	<i>Wilkes Barre, Pa.</i>
Harry Landon Chapman,	<i>Jerseyville, Ill.</i>
William Carleton Chase,	<i>Drain, Ore.</i>

Charles James Napoleon Chernoch,	<i>Menominee.</i>
Percy Clarke Church,	<i>Fresno City, Cal.</i>
Henry Cottman Churchman,	<i>Indianapolis, Ind.</i>
Dennis Hayes Clark,	<i>Ironton, O.</i>
Hazlett Norton Clark,	<i>Des Moines, Ia.</i>
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Harry Collison,	<i>Collison, Ill.</i>
Marvin Warren Connor,	<i>Ann Arbor.</i>
Charles Goldsmith Cook, A.B.,	<i>Detroit.</i>
Clarence Argyle Coolidge, Ph.B.,	<i>Niles.</i>
Harley June Cortright,	<i>Springport.</i>
Louis Convers Cramton,	<i>Lapeer.</i>
Clifford Waldorf Crandall, B.S., <i>Adrian College,</i>	<i>Columbiaville.</i>
James William Crosby,	<i>Argentine.</i>
Charles Alexander Cryderman,	<i>Milwaukee, Wis.</i>
Herman Wenger Danforth,	<i>Washington, Ill.</i>
Jesse Ward Daniel,	<i>Beury, W. Va.</i>
Dan Edward Dannenberg,	<i>Tahlequah, Ind. T.</i>
Clarence Newton Davidson,	<i>Anaconda, Mon.</i>
Edward Evan Davies,	<i>Dixon, Ill.</i>
Charles Pugh Davis, B.L.,	<i>Lewis, Ia.</i>
Mervin Day,	<i>Kossuth, O.</i>
Thomas Roland Dean, A.B., <i>Kentucky State Coll.,</i>	<i>Little Hickman, Ky.</i>
Edward C. DeHority,	<i>Elwood, Ind.</i>
David Francis Dillon, A.B., <i>Tufts College,</i>	<i>Palmer, Mass.</i>
Harry Brandt Draa,	<i>Adrian.</i>
George Julius Dreiske,	<i>Chicago, Ill.</i>
Frank Gifford Drenning, B.S., <i>Washburn College,</i>	<i>Topeka, Kan.</i>
James Byron Drew,	<i>Allegheny, Pa.</i>
Fred William Dricken,	<i>White, S. Dak.</i>
Robert Mack Dye,	<i>Antioch, O.</i>
John Edward Egan,	<i>Excello, O.</i>
William David Ellsworth,	<i>Detroit.</i>
Travis Elmore,	<i>Ashland, Ill.</i>
Joseph Hyrum Erickson,	<i>Elsinore, Utah.</i>
Joseph John Ethier,	<i>South Lake Linden.</i>
Thomas Leon Everett,	<i>Waterville, Minn.</i>
Edward Richard Fechenschner,	<i>Fenton.</i>
Harry Anthony Fenton, A.B., <i>Miami University,</i>	<i>Oxford, O.</i>
Loren Pearl Fimple, B.S., <i>Mich. Agr. Coll.,</i>	<i>Colon.</i>
Edward Augustus Fink,	<i>Pleasant Plains, Ill.</i>
Oren Henderson Fisher,	<i>New Britton, Ind.</i>
Samuel Tate Fisk, Jr.,	<i>Ann Arbor.</i>

Arthur Lyle Fitch,	<i>Howell.</i>
George Priston Fogle, B.S., <i>Georgetown College,</i>	<i>Middleburg, Ky.</i>
Fred Gorham Folsom, A.B., <i>Dartmouth College,</i>	<i>Oldtown, Me.</i>
Hattie Belle Frahm,	<i>Tuscola, Ill.</i>
Harry Frank, Jr.,	<i>Logansport, Ind.</i>
Parke George Frazier,	<i>Fort Wayne, Ind.</i>
James Milton Fuller,	<i>Tuscola, Ill.</i>
Arthur Ganschow,	<i>Saginaw, West Side.</i>
Winfred Sutton Gilbert,	<i>Spokane, Wash.</i>
William John Gillett,	<i>Herrington.</i>
Frederick Philip Glasser,	<i>Pittsburgh, Pa.</i>
Harry Leith Goodbread,	<i>Nevada, O.</i>
Charles Coy Green,	<i>Battle Creek.</i>
James Almon Greene,	<i>Pinckney.</i>
Leech Agnew Grove, A.B., <i>Lake Forest Univ.,</i>	<i>Ellwood City, Pa.</i>
George Robert Gunn,	<i>Ypsilanti.</i>
Allen White Gunnell,	<i>Colorado Springs, Col.</i>
Herbert Eugene Guthrie,	<i>Ventura, Cal.</i>
Walter Charles Haight, B.L.,	<i>Sycamore, Ill.</i>
Wilson Benjamin Haight,	<i>Addison.</i>
Joseph Gordon Hamblen, Jr.,	<i>Detroit.</i>
John Eugene Harding,	<i>Excello, O.</i>
George DeWitt Harris,	<i>Franklin, Ky.</i>
Frederic Harry,	<i>Hancock.</i>
John Michael Havery,	<i>Pittsburgh, Pa.</i>
Ira Moses Hawkins,	<i>Goshen, N. Y.</i>
Frank Hayek,	<i>Salem, O.</i>
Albert Healy,	<i>Argentine.</i>
Frederick William Heatherly,	<i>El Paso, Tex.</i>
Ernest John Heinze,	<i>Elsie.</i>
James Madison Hervey,	<i>Evart.</i>
Anna Blanch Hills,	<i>Ann Arbor.</i>
Oliver Sharp Hoffman,	<i>Rochester, Pa.</i>
James Ralph Hogg,	<i>Knoxville, Ill.</i>
†Lemuel Homer Hole,	<i>Chicago, Ill.</i>
Cornelius Nichols Hollerich,	<i>Spring Valley, Ill.</i>
Joseph William Howell,	<i>Macon.</i>
Ned Y. Howell,	<i>Salem, O.</i>
Ward Hughes,	<i>Chicago, Ill.</i>
George Graham Hunter,	<i>Ovid.</i>
Robert Edward Hyde,	<i>Goshen, Ind.</i>
Orville Kiger Jones,	<i>Connersville, Ind.</i>
†John Wesley Judson,	<i>Detroit.</i>

William Kehoe,	<i>Rohnerville, Cal.</i>
William Hilyard Kinnear,	<i>Tupper Lake, N. Y.</i>
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James Kuhns,	<i>Boyne City.</i>
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Marsh Euen Lambert,	<i>Shawneetown, Ill.</i>
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William James Larmour,	<i>Dayton, O.</i>
Kirke Lathrop,	<i>Detroit.</i>
George William Levin,	<i>Michigamme.</i>
Harry Denton Levy,	<i>Chicago, Ill.</i>
Mortimer Ben Levy,	<i>Moberly, Mo.</i>
Moses Montefiore Levy,	<i>Quincy, Ill.</i>
Charles Shepard Lewis,	<i>Grand Rapids.</i>
John H. Lewis, Jr.,	<i>Knoxville, Ill.</i>
Almon Henderson Linn,	<i>Alpha, Ill.</i>
Frank Powell Llewellyn,	<i>Lookout Mountain, Tenn.</i>
William David Lloyd,	<i>Johnstown, Pa.</i>
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Wilfred Thomas Lutz,	<i>Beloit, Kan.</i>
William Henry Lutz,	<i>Chester, Pa.</i>
Halliard Graham Lyle,	<i>Battle Creek.</i>
John Francis McCann,	<i>Ypsilanti.</i>
William Lee McConnell,	<i>Hickory, Pa.</i>
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William George McCune,	<i>Petoskey.</i>
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John Gaily McKelvy,	<i>Washington, Kan.</i>
Charles Francis McKenzie,	<i>Banfield.</i>
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Milton James McVean,	<i>Fenton.</i>
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Webb Perfet Matthews,	<i>Logansport, Ind.</i>
John Joseph Mee,	<i>Woonsocket, R. I.</i>
Frank Harry Mehlberg,	<i>Fenton.</i>
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Richard Roberts Mitchell,	<i>Charlestown, Ill.</i>
Frank Moorland,	<i>Hadley.</i>
Glen Allen Morse,	<i>Grand Rapids.</i>
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Warren Mullett,	<i>Kansas City, Mo.</i>
Joseph James Nagle,	<i>Boston, Mass.</i>
Elton Robert Nellis,	<i>Wyandotte.</i>
Gustave Nelson,	<i>Chicago, Ill.</i>
Walter Harper North, A.B., <i>Hillsdale College</i> ,	<i>North Adams.</i>
Hartwell Nowell,	<i>Chilliwack, British Columbia.</i>
William Richard Oates,	<i>Calumet.</i>
William O'Brien,	<i>Grand Marais.</i>
Maurice Griffin O'Connor,	<i>Blockton, Ia.</i>
John Oliver,	<i>Iron Mountain.</i>
Frank Milon Orem,	<i>Salt Lake City, Utah.</i>
Samuel Peter Orth, B.S., <i>Oberlin College</i> ,	<i>Howell.</i>
John Moore Paine,	<i>Detroit.</i>
Don Amherst Parkhurst,	<i>Grand Rapids.</i>
Cyrus Edward Pattee, B.S., <i>Northern Indiana</i>	
<i>Normal University</i> ,	<i>Lowell, Ind.</i>
John Wallace Paul,	<i>Johnstown, Pa.</i>
James Shanks Perry,	<i>Willard, Utah.</i>
Elmer Norman Peters,	<i>Springport.</i>
Earl Francis Phelps,	<i>Sturgis.</i>
Fred Edgar Phillipson,	<i>Dowagiac.</i>
John Paul Pierce,	<i>Pittsburgh, Pa.</i>
George Hancock Plummer,	<i>Saginaw, East Side.</i>
Louis Albert Pratt, B.L.,	<i>Traverse City.</i>
William Edward Rafferty,	<i>Chicago, Ill.</i>
Henry Eber Randall,	<i>Vassar.</i>
Fred Morton Raymond,	<i>Berlin.</i>
Morris Houghton Reed, A.B., <i>Yale University</i> ,	<i>Saint Joseph, Mo.</i>
Davenport Brown Richardson,	<i>Oklahoma City, Okla. T.</i>
Turner Samuel Rickart,	<i>Barry, Ill.</i>
Harry Rickel,	<i>Detroit.</i>
James Frost Riley,	<i>Greenville, S. C.</i>
Mory Franklin Ringolsky,	<i>Cheyenne, Wyo.</i>
Owen Forney Rippey,	<i>Ann Arbor.</i>
Harry Warren Robinson,	<i>Kimball, Neb.</i>
Herbert Beverly Robinson,	<i>Chicago, Ill.</i>

Louis Leslie Robinson,	<i>Sunman, Ind.</i>
Robert Edward Robinson,	<i>White Lake, N. Y.</i>
George Henry Rosenthal,	<i>Chicago, Ill.</i>
Burton Edward Ross,	<i>Spring Arbor.</i>
Lucius Henry Rouse,	<i>Colorado Springs, Col.</i>
Herbert Walter Runnels,	<i>Sault Ste. Marie.</i>
George Frederick Ruppe,	<i>Calumet.</i>
Alexander Russell,	<i>West Superior, Wis.</i>
Arthur Robert Rutherford,	<i>Waddington, N. Y.</i>
Perry Andrew Sadler,	<i>Hudson.</i>
Sigmond Sanger,	<i>Toledo, O.</i>
Eugene Saunders,	<i>Reading.</i>
Andrew Jackson Sawyer, Jr.,	<i>Ann Arbor.</i>
Harry Garr Schock, A.B.,	<i>South Bend, Ind.</i>
Edward Schreiner,	<i>Allegheny, Pa.</i>
Walter Farnan Schuyler,	<i>Colorado Springs, Col.</i>
Jacob Williams Schwingel,	<i>Canton, O.</i>
Philip Walter Seipp,	<i>Chicago, Ill.</i>
John Allen Semer,	<i>Escanaba.</i>
Lisle Shanahan,	<i>Edwardsburg.</i>
Chester Delbert Sharp,	<i>Centerville.</i>
Frank Wiley Shepherd,	<i>Elgin, Ill.</i>
Frederic Royal Sherman,	<i>San Francisco, Cal.</i>
Francis John Shields,	<i>Howell.</i>
Bruce Carman Shorts,	<i>Mount Pleasant.</i>
William Stanley Sinclair,	<i>Galveston, Tex.</i>
Earnest Augustus Skinner,	<i>Owosso.</i>
Parkhurst Sleeth,	<i>DeLassus, Mo.</i>
Dewitt Clinton Slocum,	<i>Terre Haute, Ind.</i>
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George Harris Smith,	<i>Salt Lake City, Utah.</i>
Harry Alfred Smith,	<i>Saginaw, West Side.</i>
Robert Abram Smith,	<i>Brooklyn.</i>
Wallis Craig Smith,	<i>Saginaw, West Side.</i>
Samuel Wilmer Snodgrass,	<i>Buchanan.</i>
Ellis Gary Soule,	<i>Plainwell.</i>
Orson Pratt Soule,	<i>Hooper, Utah.</i>
Robert Edward Springett,	<i>Almont.</i>
George Marcellus Stephen,	<i>Ann Arbor.</i>
Albert David Stevens,	<i>Springfield, Ill.</i>
Angus Stewart,	<i>Saint Thomas, Ont.</i>
Earl Rutherford Stewart,	<i>Grand Rapids.</i>

Samuel Frederick Stewart,	<i>Benton Harbor.</i>
Seymour Ely Straight,	<i>Hudson, O.</i>
Justin Sutherland,	<i>Grand Ledge.</i>
Frank Raymond Sweasey,	<i>Eureka, Cal.</i>
Claude Lorraine Tarbox,	<i>Jackson.</i>
Joseph Harry Taylor,	<i>Ann Arbor.</i>
Joshua Charles Taylor,	<i>Chester, Pa.</i>
Fulton Thompson,	<i>Chrome, Pa.</i>
Walter Dudley Tipton,	<i>White Sulphur Springs, Mon.</i>
Frederic Lawrence Travers,	<i>Saginaw, East Side.</i>
Leo Clyde Tuck, B.S., <i>Napa College,</i>	<i>Batavia, Cal.</i>
John Theodore Twohey,	<i>Burlington, Vt.</i>
Duane Harry Wager,	<i>Chicago, Ill.</i>
David McGoodwin Walker, A.B., <i>Central Univ.,</i>	<i>Franklin, Ky.</i>
Martin Luther Walter,	<i>Natrona, Pa.</i>
Roy Milton Watkins,	<i>Rockford.</i>
David Palmer Weimer,	<i>Johnstown, Pa.</i>
Arnold Butler Wetmore,	<i>Detroit.</i>
Judson Douglas Wetmore,	<i>Jacksonville, Fla.</i>
G. Grant White,	<i>Lena, O.</i>
Lloyd Charles Whitman, A.B.,	<i>Ann Arbor.</i>
George Culver Wilson,	<i>Brooklyn.</i>
Leroy Allen Wilson, B.S., <i>Mich. Agr. Coll.,</i>	<i>Lawton.</i>
Mahlon Egbert Wilson,	<i>Plymouth, O.</i>
Carl Victor Wisner,	<i>Tecumseh.</i>
Herbert Dudley Witherell,	<i>Manchester.</i>
Lucerne Austin Wittenmeyer,	<i>Fenton.</i>
William Fred Wolf,	<i>Saginaw, East Side.</i>
Alphonso Calvin Wood,	<i>Angola, Ind.</i>
Eugene Charles Worden,	<i>Grand Rapids.</i>
Francis Louis Wurzburg,	<i>Grand Rapids.</i>
Isidore Ziegler,	<i>Huntington, W. Va.</i>
Edgar L. Zigler,	<i>Goshen, Ind.</i>

SPECIAL STUDENTS.

NAME.	RESIDENCE.
Earnest Bennett Adams,	<i>Los Angeles, Cal.</i>
Frank Dale Allen,	<i>Spokane, Wash.</i>
Henry Edward Bodman, Ph.B.,	<i>Toledo, O.</i>
William Morris Bresler,	<i>Bay City.</i>
William John Collum,	<i>Ann Arbor.</i>
Neville Charles Fisher, A.M., <i>Georgetown Coll.,</i>	<i>Paris, Ky.</i>
Carl Lewis Flood,	<i>Hart.</i>

Edwin Charles Goddard, Ph.B.,	<i>Ann Arbor.</i>
Arthur Gregory Harrison, A.B., <i>University of</i> <i>New Brunswick,</i>	<i>Frederickton, New Brunswick.</i>
John Albert Hellenthal,	<i>Holland.</i>
Edward Everett Hindman, A.B., <i>Indiana Univ.,</i>	<i>Grand Rapids.</i>
John Fleming Main, A.B., <i>Princeton University,</i>	<i>Seaton, Ill.</i>
Dwight Elmer Minnis,	<i>Taylorville, Ill.</i>
Lewis Allen Nuckols, B.S., <i>Kentucky University,</i>	<i>Versailles, Ky.</i>
Harry Augustus Pounds,	<i>Oberlin, O.</i>
John Sherring Pratt,	<i>Toledo, O.</i>
Eva Stevenson,	<i>Ann Arbor.</i>
Leopold Joseph Ullman,	<i>Cleveland, O.</i>
Paul Darling Wright, Ph.B.,	<i>Westfield, N. Y.</i>

The students named below, enrolled in the Department of Literature, Science, and the Arts, also pursue studies in the Department of Law.

NAME.	RESIDENCE.
Bayard Hoyt Ames,	<i>Highlands, Col.</i>
Frederick Charles Ballard,	<i>North Branch.</i>
Harold Hunker Emmons,	<i>Ann Arbor.</i>
William Henry Hadley,	<i>Ann Arbor.</i>
Edward Hiram Storrs Martin,	<i>Chicago, Ill.</i>
Stanley M. Matthews,	<i>Escanaba.</i>
Victor Alphonso George Murrell, LL.B.,	<i>Ann Arbor.</i>
Hervey Montgomery Smith,	<i>Bloomsburg, Pa.</i>
Roland Dare Whitman,	<i>Ann Arbor.</i>

School of Pharmacy.

FACULTY.

JAMES B. ANGELL, LL.D., *President*.
ALBERT B. PRESCOTT, M.D., LL.D., *Dean*.
WILLIAM H. PETTEE, A.M.
VOLNEY M. SPALDING, Ph.D.
OTIS C. JOHNSON, Ph.C., A.M.
PAUL C. FREER, Ph.D., M.D.
EDWARD D. CAMPBELL, B.S.
✓ ALVISO B. STEVENS, Ph.C., *Secretary*.
✓ JULIUS O. SCHLOTTERBECK, Ph.D.
DAVID M. LICHTY, M.S.
PERRY F. TROWBRIDGE, Ph.B.
DAVID L. DAVOLL, Ph.C.

Assistants.

JAMES SEYMOUR, Ph.C.
HERMAN E. BROWN, B.S.
ARCHIBALD CAMPBELL, Ph.B.

STUDENTS.

RESIDENT GRADUATES.

NAME.	RESIDENCE.
Clarence Henry Baum, Ph.C.,	<i>Danville, Ill.</i>
Oscar Conrad Diehl, Ph.G., <i>Buffalo College of</i>	
<i>Pharmacy</i> , Ph.C.,	<i>Buffalo, N. Y.</i>
James W. T. Knox, Ph.C., <i>Holder of the Stearns</i>	
<i>Fellowship</i> ,	<i>Ann Arbor.</i>
James Seymour, Ph.C.,	<i>Ann Arbor.</i>
Miles Lucius Trowbridge, Ph.C.,	<i>Syracuse, N. Y.</i>
Milton Lyman Trowbridge, Ph.C.,	<i>Syracuse, N. Y.</i>
Ezra Jones Ware, Ph.C.,	<i>Grand Rapids.</i>

311

UNDERGRADUATES.*

NAME.	DEGREE.	CREDIT.	RESIDENCE.
Ursa S. Abbott,	Ph.C.	28	Clearport, O.
John Newton Adams,	Ph.C.		Sault Ste. Marie.
Frederick James Austin,	Ph.C.	29	Ann Arbor.
Eva Albertie Taylor Bachelor,	Ph.C.	34	Saint Charles, Minn.
John Sell Bachman,	Ph.C.	34	Morrice.
Frederick J. Baringer,	Ph.C.	25	Gould, O.
George Woodbury Beisel,	Ph.C.	16	Monroe.
Evi Dunn Benjamin,	Ph.C.	34	Pontiac.
Carl J. Biehl,	Ph.C.		Sandusky, O.
Walter Henry Blome,	Ph.C.		Monroe.
Norman Taylor Boggess,	Ph.C.	34	Huntington, W. Va.
Walter Stephen Brooks,	B.S.		Caledonia.
John Henry Brown,	Ph.C.	12	Wilmington, O.
Walter Briggs Cady, Ph.C.,	B.S.	106	Ann Arbor.
Arthur Whitlesey Cannell,	Ph.C.		Lansing.
James William Cobb,	Ph.C.	27	Birmingham.
Carl Patterson Conn,	Ph.C.		Van Wert, O.
John Asa Coram,	Ph.C.		Springfield, O.
Aimée Coulter,	Ph.C.		Chicago, Ill.
Otis Adams Critchett,	Ph.C.	30	Chicago, Ill.
Harry Edwin Douglas,	Ph.C.		Paw Paw.
Edward Cumberford Frank,	Ph.C.		Toledo, O.
Henry Hermann Gerkenmeyer,		23	Toledo, O.
Oscar William Gorenflo,	Ph.C.	14	Detroit.
Edward Sherman Gott,	Ph.C.	31	Fort Madison, Ia.
George Elliott Granger,			Champaign, Ill.
Nelson Alonzo Hall,	Ph.C.	20	Sault Ste. Marie.
Thomas Francis Halloran,	Ph.C.		Chicago, Ill.
Mark Butcher Hawes,	Ph.C.		Parma.
Bert Leroy Hayden,	Ph.C.		Cassopolis.
Perley Willis Hickman,	Ph.C.	24	Nelsonville, O.
Henry C. Hitchcock,	B.S.		Ann Arbor.
Louis Theodor Wilhelm Hogrefe,	Ph.C.	27	Detroit.

*The abbreviations in the column headed **DEGREE** indicate the degree for which the student is studying. Where no abbreviation is given, the student is pursuing miscellaneous studies without being registered as a candidate for a degree. The figures in the column headed **CREDIT** indicate the number of hours of work taken by the student prior to the beginning of the current academic year, 1896-97, and completed without conditions, or credited to them on advanced standing. By an hour of work is meant the equivalent of one exercise a week for one semester. Compare page 183.

Raymond Edward Kanouse,	Ph.C.	9	<i>Manistee.</i>
William Kremers,	Ph.C.		<i>Holland.</i>
John William Lutes,	Ph.C.	46	<i>Richmond.</i>
Thomas Ambrose Major,	B.S.		<i>Manistee.</i>
Carl Metzger,	Ph.C.		<i>Winchester, Ill.</i>
Leroy Earl Minot,	Ph.C.		<i>Chicago, Ill.</i>
Clara Ella Nichols,	Ph.C.	34	<i>Beach City, O.</i>
Walter Adams Nivling,	Ph.C.	45	<i>Sioux City, Ia.</i>
William Henry Noll,	Ph.C.	34	<i>Fort Wayne, Ind.</i>
Floyd A. Northrop,	Ph.C.		<i>Northville.</i>
Elmer Albert Phillips,	Ph.C.		<i>Sinclairville, N. Y.</i>
Ernest Tracy Pettis,	Ph.C.		<i>Petoskey.</i>
S. Agnes Rich,	Ph.C.	31	<i>Traverse City.</i>
Sara Esther Richter,	Ph.C.	34	<i>Bethany, Mo.</i>
Edgar Schiller,	Ph.C.		<i>Ida Grove, Ia.</i>
Henry Philip Schmidt,	Ph.C.		<i>Anacortes, Wash.</i>
Caroline Barbara Service,	Ph.C.		<i>Ann Arbor.</i>
Leonard Short,	Ph.C.		<i>Manistee.</i>
LaVerne Ward Spring,	Ph.C.		<i>Coldwater.</i>
Alice M. Stevens,	Ph.C.	17	<i>Evansville, Wis.</i>
Harry Schellhous Stoddard,	Ph.C.	34	<i>Monroe.</i>
Amos Dorwin Sturgis,	Ph.C.	44	<i>Sturgis.</i>
Daniel George Sullivan,	Ph.C.		<i>Holyoke, Mass.</i>
Will Earl Sullivan,	Ph.C.		<i>Owosso.</i>
Burton Allen Sweet,	B.S.		<i>Carson City.</i>
Herbert Eugene Taber,	Ph.C.		<i>West Kingston, R. I.</i>
Roys J. Van Liew,	Ph.C.		<i>Port Huron.</i>
Arthur Fowler Vickery,	B.S.		<i>Charlotte.</i>
Charles Linden Wagner,	Ph.C.		<i>South Brooklyn, O.</i>
Charles Franklin Watkins,	Ph.C.	44	<i>Reed City.</i>
Oscar Charles Wheeler,	Ph.C.	25	<i>Ann Arbor.</i>
Sam Herman Zimmerman,	Ph.C.		<i>Helena, Mon.</i>

Homœopathic Medical College.

FACULTY.

JAMES B. ANGELL, LL.D., *President.*
WILBERT B. HINSDALE, M.S., M.D., *Dean.*
OSCAR LESEURE, M.D.
ROY S. COPELAND, M.D., *Secretary.*
MYRON H. PARMELEE, M.D.
WILLIS A. DEWEY, M.D.
SUMNER G. BUSH, M.D.

OSCAR R. LONG, M.D.,
Non-Resident Lecturer on Mental and Nervous Diseases.

Assistants.

WALTER N. FOWLER, M.D.
CHARLES W. RYAN, M.D.

STUDENTS.

RESIDENT GRADUATES.

NAME.	RESIDENCE.
Ernest Nyssens, M.D., <i>University of Brussels,</i>	<i>Brussels, Belgium.</i>
Charles Armand Rabethge, M.D., <i>Jefferson Medical College,</i>	<i>Ann Arbor.</i>
†Murray Maywood Sears, M.D.,	<i>Ann Arbor.</i>

FOURTH YEAR STUDENTS.

NAME.	RESIDENCE.
William Grant Decker,	<i>Detroit.</i>
Albert Jeremiah Elliott,	<i>Ulverton, Province of Quebec.</i>
Cornelia Frances Kerr,	<i>Ann Arbor.</i>
Charles Martin Steele,	<i>Buchanan.</i>
Leonard Herbert Stewart, Ph.B., <i>Kalamazoo Coll.,</i>	<i>Ann Arbor.</i>

THIRD YEAR STUDENTS.

NAME.	RESIDENCE.
John Newton Babcock,	<i>Bay City.</i>
Joseph Harris Ball,	<i>Ann Arbor.</i>
Raymond Alfred Clifford,	<i>Wadsworth, O.</i>
Ernest Bigelow Maynard,	<i>South Berlin, Mass.</i>
Charles Augustus Montague,	<i>Buchanan.</i>
Clarence Augustus Schimansky,	<i>Sandusky, O.</i>
Samuel Porter Tuttle,	<i>Saint Louis.</i>
Marion Wells,	<i>Garbutt, N. Y.</i>

SECOND YEAR STUDENTS.

NAME.	RESIDENCE.
Russell E. Atchison,	<i>Salem.</i>
William Alfred Crandall, LL.B.,	<i>Toledo, O.</i>
Robert Lloyd Johnson,	<i>Vassar.</i>
William Witry Jungels,	<i>Dubuque, Ia.</i>
Dean Wentworth Myers,	<i>Muir.</i>
Harry Melvin Piper,	<i>Denver, Ind.</i>
Paul Thompson,	<i>Lapeer.</i>
Tisdale Sartoris Walker,	<i>Salem.</i>
Charles Edward Wehrle,	<i>Toledo, O.</i>
Floyd Edward Westfall,	<i>Niles.</i>

FIRST YEAR STUDENTS.

NAME.	RESIDENCE.
Bertram Franklin Bailey,	<i>Buchanan.</i>
William Henry Belknap,	<i>Greenville.</i>
Artemas Briggs,	<i>Saginaw, East Side.</i>
Stephen R. Chase,	<i>Chelsea.</i>
Gilbert A. Cotton,	<i>Grand Rapids.</i>
George Allen Davies,	<i>Warren, Pa.</i>
Nellie Duroy,	<i>Sandusky, O.</i>
Mina Bianca Gault,	<i>Dawson, Pa.</i>
Paul Eber Norman Greeley	<i>Waterman, Ill.</i>
Scott Fraser Hodge,	<i>Plymouth.</i>
Mae Joyce,	<i>Ludington.</i>
†John Joslyn Kelley,	<i>Sturgis.</i>
James McKee,	<i>Laingsburg.</i>
Frances Jane Millard,	<i>Rochester, N. Y.</i>
Charles Madison Mooney,	<i>Wheelersburg, O.</i>
Harry Darwin Obert,	<i>Ann Arbor.</i>

William Colfax Roberts, B.S., <i>Univ. of Nebraska,</i>	<i>Normal, Neb.</i>
Joseph Scheidler,	<i>Owosso,</i>
Fred James Sober,	<i>Salem.</i>
Pauline Rundell Wilson,	<i>Ann Arbor.</i>
Erle Brice Woodward,	<i>Lincoln, Neb.</i>

College of Dental Surgery.

FACULTY.

JAMES B. ANGELL, LL.D., *President.*
JONATHAN TAFT, M.D., D.D.S., *Dean.*
JOHN A. WATLING, D.D.S.
WILLIAM H. DORRANCE, D.D.S.
NELVILLE S. HOFF, D.D.S.
FREDERICK G. NOVY, Sc.D., M.D.
G. CARL HUBER, M.D.
SIMON M. YUTZY, M.D.
DAVID M. LICHTY, M.S.
LOUIS P. HALL, D.D.S.
PERRY F. TROWBRIDGE, Ph.B.
CYRENUS G. DARLING, M.D.

Demonstrators and Assistants.

ALLISON W. HAIDLE, D.D.S.
FRANK E. LOGAN.

STUDENTS.

SENIORS.

NAME.	RESIDENCE.
William Henry Baker,	<i>Dalton.</i>
Clare George Bates,	<i>Elsie.</i>
Elmer Isaac Beistle,	<i>Buchanan.</i>
James Carroll Blair,	<i>Toledo, O.</i>
Harry Earl Blunt,	<i>Ann Arbor.</i>
Henry William Charles Bödecker, B.S.,	<i>New York, N. Y.</i>
Ernest Edward Bubb,	<i>Gloucester, England.</i>
June Alice Burr,	<i>Bangor, Me.</i>
Thomas Edward Carmody,	<i>Owosso.</i>
Herbert Thurston Cummings,	<i>Grand Haven.</i>

Guy Henry Dennis,	<i>La Salle, Ill.</i>
Albert Julius DuBois,	<i>Neenah, Wis.</i>
Arthur Benton Dutch,	<i>Constantine.</i>
George Daniel Edgar,	<i>Blissfield.</i>
Henry Christopher Fiebig,	<i>Grand Rapids.</i>
Frank Russell Fletcher,	<i>Cadillac.</i>
John E. Graham,	<i>Waterloo, Ind.</i>
Selwyn Sumner Greeley,	<i>Waterman, Ill.</i>
Albert Benjamin Green,	<i>Pinckney.</i>
Grant Simon Hadley,	<i>Hillsdale.</i>
Clark Warner Hill,	<i>Ann Arbor.</i>
Louis Richards Hoelzle,	<i>Ann Arbor.</i>
Harry Sanburn Holmes,	<i>Caribou, Me.</i>
Samuel Wesley Honey,	<i>Mitchell, Ont.</i>
Fred Holloway Hood,	<i>Rome.</i>
Frank Ward Howlett,	<i>Ann Arbor.</i>
Samuel William Hussey,	<i>Mendon, O.</i>
Wendell Howard Johnson,	<i>Alliance, O.</i>
Fred William Joslin,	<i>Big Rapids.</i>
Byron Linzie Kesler,	<i>Salina, Utah.</i>
Frederick John Klein, Jr.,	<i>Detroit.</i>
Gustavus Eugene Kuhl,	<i>Manchester.</i>
Frank Dwight Loomis,	<i>Helena, Mon.</i>
Kennith McKay,	<i>Midland.</i>
Frank Thomas McNamara,	<i>Chelsea.</i>
Roland Sweetland Mitchell,	<i>Ann Arbor.</i>
Blaine Bowman Pettit,	<i>St. Louis.</i>
William Racine Purmort,	<i>Saginaw, West Side.</i>
Carlos Walter Putt,	<i>Ann Arbor.</i>
Oloff Wellington Randall,	<i>Fort Huron.</i>
Albert Jesse Reed,	<i>Saginaw, East Side.</i>
Dessie Brown Robertson,	<i>McConnelsville, O.</i>
John Milton Rosenthal,	<i>Fort Wayne, Ind.</i>
Samuel Kane Scharlott,	<i>Steubenville, O.</i>
Arthur Walker Schurtz,	<i>Goshen, Ind.</i>
Charles Elsworth Sheldon,	<i>Ann Arbor.</i>
Charles Lindsley Sitzler,	<i>Ann Arbor.</i>
Luman Reed Slawson,	<i>Bay City.</i>
James Curtis Snook,	<i>Bakersfield, Cal.</i>
Charles Clifford Stone,	<i>Carson City.</i>
Delmer Willis Stoup,	<i>Ypsilanti.</i>
Daniel Templar,	<i>Woodstock, Ont.</i>

*George Dielerich Tienken,
Edward Leonard Vaile,
Ernest Percy Van Kleeck,
James Norman Vodrey, Jr.,
Harry Douglas Watson,
Albert Joseph Wildanger,
Albert John Wolfert,

Rochester.
Rochelle, Ill.
Ann Arbor.
East Liverpool, O.
Grand Rapids.
Flint.
Toledo, O.

JUNIORS.

NAME.

Edward John Anderson,
Roy Archbold,
Arthur Albert Baker,
Alfred Baldwin,
Richard E. Bloomer,
Walter Herbert Bowman,
Lyman Smith Brown,
Francis Charles Castell,
Wesley Alonzo Chamberlain,
John Franklin Conley,
James Roy Davis,
James Barnard Doyle,
Robert Norman Forbes,
Percy Robert Glass,
Claude Charles Goodes,
Richard Bertram Hamilton,
John T. Hardy,
Harold Martin Herron,
Robert Brown Howell,
Bessie Hutchinson,
Ulysses Simpson Jeffs,
George Norman Kimball,
Alexander H. Kinmond,
Marc Anthony Kroupa,
Carl Hans Lebert,
Herbert Edgar Lehr,
James McMillan Loudon,
Chalmers J. Lyons,
Harry Brown McMillan,
Edwin Kirkhuff Medler,
Stephen A. D. Merchant,
James Weston Minerd,

RESIDENCE.

Maidstone, England.
Decatur, Ind.
Woodville.
Providence, R. I.
Keithsburg, Ill.
Toledo, O.
Hudson.
Pontiac.
Muskegon.
Dexter.
Ann Arbor.
Grand Rapids.
Centre Lisle, N. Y.
Cadillac.
Flint.
Detroit.
Alpena.
Williamston.
Philadelphia, Pa.
Ann Arbor.
Rockland.
Port Gamble, Wash.
Saint Johns.
Mapleton.
Stuttgart, Germany.
Marine, Ill.
Traverse City.
Mt. Pleasant.
Grand Rapids.
Sault Ste. Marie.
Harlan, Ind.
Battle Creek.

*Deceased.

Guy Raymond Palmer,	<i>Charlotte.</i>
Clarence Edward Pease,	<i>Saginaw, East Side.</i>
Leslie Ward Platt,	<i>Niles.</i>
Lester George Platt,	<i>Niles.</i>
Thomas Crompton Reid,	<i>Lapeer.</i>
John Martin Rich,	<i>Horicon, Wis.</i>
Fred Evart Robinson,	<i>Trout Creek.</i>
Claude Burns Roe,	<i>Buchanan.</i>
Ralph Jay Roper,	<i>Jamestown, N. Dak.</i>
John Henry Setzler,	<i>Vandalia.</i>
Philip Roper Smith,	<i>Rushton.</i>
John William Smoots,	<i>Ann Arbor.</i>
Arthur Byron Snow,	<i>Chesaning.</i>
Joseph Bishop Stewart,	<i>New York, N. Y.</i>
John Howard Stofflet,	<i>Vicksburg.</i>
Arthur Milton Sweet,	<i>Providence, R. I.</i>
Daniel Michael Thompson,	<i>Detroit.</i>
Thomas Budd Van Horne,	<i>Franklin, O.</i>
Harry Melville Viel,	<i>Fenton.</i>
Philip Ernest Waugh,	<i>Cedar Falls, Ia.</i>
Oliver Wilson White,	<i>Chatham, Ont.</i>
Albert Crosswell Wilson,	<i>Ann Arbor.</i>
Bertha Mae Woodin,	<i>Ann Arbor.</i>
Lewis Denison Zincke,	<i>Chelsea.</i>

The following student, enrolled in the Department of Medicine and Surgery, is also pursuing studies as a junior student in the College of Dental Surgery.

NAME.	RESIDENCE.
Joseph Trower Davies,	<i>Battle Creek.</i>

FRESHMEN.

NAME.	RESIDENCE.
William John Allan,	<i>Calumet.</i>
Arthur Eugene Alther,	<i>Minneapolis, Minn.</i>
Victor Emmet Bedford,	<i>Delaware, O.</i>
Hellmuth Philip Binzel,	<i>Beaver Dam, Wis.</i>
Clarence Henry Burton,	<i>Detroit.</i>
Francis Lawrence Busch,	<i>Marquette.</i>
Will Chauncy Butler,	<i>Williamston.</i>
Joseph M. Cartwright,	<i>East Liverpool, O.</i>
Frank Popham Cattermole,	<i>Ann Arbor.</i>
Carroll Flood Chase,	<i>Smyrna.</i>
Walter James Cook,	<i>Ann Arbor.</i>

Lavern Otis Cushing,
 Joseph Eugene Dickey,
 Ignatius Michael Duffy,
 Ernest Eugene Ellsworth,
 Amos Charles Erdman,
 Loran Scott Fleming,
 Paul Rytson Furlong,
 James Roy Furman,
 John Edwin Gilbert,
 †Hugh Thomas Gundry,
 Henry William Harvey,
 Claude Elton Hathaway,
 Perry Franklin Hines,
 Rene Melvin Hitchcock,
 Stanley A. Horning,
 Richard John Huyck,
 Carl August Leonard Johnson,
 †William Webster Kimmel,
 Herbert Charles King,
 Wilfred Douglas Kirk,
 Jay William Kline,
 Frederick Ross Kriwitz,
 William George Law,
 James Clay Lowrie,
 Charles Levingston McKinnis,
 Charles Thomas McMurray,
 William Chase Macy,
 Sidney Martin,
 George Henry Mengel,
 Earl Merritt,
 Glenn Lowel Merritt,
 Benjamin John Miller,
 Charles Jeremiah Miller,
 Hugh Dowling Miller,
 John Miller,
 Robert Washington Miller,
 George Ethelbert Morden,
 Archibald Lindsley Muir,
 Fred Clifton Orvis,
 Harry Chantler Orvis,
 Charles Mason Owen,
 Arthur Thomas Paull,
 Sidney Dale Peters,

Dexter.
Kalamazoo.
Ann Arbor.
Vandalia.
Alma, Mo.
San Lucas, Cal.
West Chelmsford, Mass.
Cadillac.
Sterling.
Grand Blanc.
Worden.
Ionia.
Ann Arbor.
Napa, Cal.
Chatham, Ont.
Decatur.
Bloomington, Ill.
Kendallville, Ind.
Ithaca.
Kokomo, Ind.
Constantine.
Kendallville, Ind.
Flint.
Detroit.
Nashville.
West Fitchburg, Mass.
New Bedford, Mass.
Ann Arbor.
Bucyrus, O.
Williamsville.
Dubuque, Ia.
Negaunee.
Lapeer.
Saginaw, East Side.
Calumet.
North Benton, O.
Ann Arbor.
Grand Rapids.
Port Huron.
Port Huron.
Toledo, O.
Calumet.
Flat Rock.

William John Polglase,	<i>Allouez.</i>
William Satterlee Potter, Jr.,	<i>Battle Creek.</i>
Courtland Rutledge Price,	<i>Hicksville, O.</i>
Francis Edwin Renkenberger,	<i>Columbiana, O.</i>
George Maymott Richardson,	<i>Chatham, Ont.</i>
Ray Donald Robinson,	<i>Trout Creek.</i>
Erwin Albert Salisbury,	<i>Ann Arbor.</i>
Earl Winfield Sanford,	<i>Clifford.</i>
Samuel Joseph Scott,	<i>Rio, Wis.</i>
Edmund Harold Shannon,	<i>Tara, Ont.</i>
Harry William Sheldon,	<i>Chatham, Ont.</i>
John Floyd Sortore,	<i>Detroit.</i>
Flora Mae Spore,	<i>West Bay City.</i>
Clifford Finley Stipp,	<i>Toledo, O.</i>
Harrison Andrew Stites, A.B., <i>Hillsdale College,</i>	<i>Camden.</i>
Marvin Victor Swift,	<i>Ann Arbor.</i>
Archibald Thompson,	<i>Iron Bridge, Ont.</i>
Elbert James Tower,	<i>Ionia.</i>
Loren Starritt Treat,	<i>Stuart, Ia.</i>
Edward Norman Trenholm,	<i>Coaticooke, Province of Quebec</i>
Fred Marcus Washburn,	<i>Perry, N. Y.</i>
Dudley Welch,	<i>Franklin Centre, Province of Quebec.</i>
Benjamin Warren Wells,	<i>Saginaw, West Side.</i>
Chauncey Clifton Wescott,	<i>Grand Rapids.</i>
Forrest Lyman Williams,	<i>Ludington.</i>
Frank DeWitt Wilson,	<i>Loda, Ill.</i>
Charles Augustus Wise,	<i>Kalamazoo.</i>
Alvin Oleon Wright,	<i>Hollister, Cal.</i>

Summer Schools, 1896,

*In the Department of Literature, Science, and the Arts, and in the
Department of Law.*

STUDENTS.

NOTE.—Italic letters following a name show that the student is attending the University in the year 1896-7, and is enrolled in the department indicated:—*a* denoting Department of Literature, Science, and the Arts; *e*, Department of Engineering; *m*, Department of Medicine and Surgery; *l*, Department of Law; *p*, School of Pharmacy; *h*, Homœopathic Medical College; *d*, College of Dental Surgery.

NAME	RESIDENCE.
Charles Wallace Adams, A.B., <i>a</i> ,	<i>Ann Arbor.</i>
Romanzo Colfax Adams, <i>a</i> ,	<i>Bloomington, Wis.</i>
Hannah Matilda Anderson,	<i>Ann Arbor.</i>
Mary Josephine Anderson, <i>a</i> ,	<i>Battle Creek.</i>
Nellie Florence Anderson, <i>a</i> ,	<i>Vincent, Ia.</i>
Harry Bellinger Andrus,	<i>Nashville.</i>
William Eugene Adolphus Aul,	<i>Battle Creek.</i>
Anna Mary Baker, <i>a</i> ,	<i>Terre Haute, Ind.</i>
Bertha Emily Barber, <i>a</i> ,	<i>Norwalk, O.</i>
Ida Leora Barber, <i>a</i> ,	<i>Grand Rapids.</i>
Arthur Stanley Bayne,	<i>LaSalle, Ill.</i>
Irving McCoullough Bean, <i>e</i> ,	<i>Milwaukee, Wis.</i>
Mark Brewer Beattie, <i>e</i> ,	<i>Ann Arbor.</i>
Rudolph Best, <i>a</i> ,	<i>Davenport, Ia.</i>
Lilian Marion Bigham, <i>a</i> ,	<i>Ann Arbor.</i>
Elton Pope Billings, A.B.,	<i>Grand Rapids.</i>
Georgiana Cleis Blunt, <i>a</i> ,	<i>Ann Arbor.</i>
Joseph Christian Boldt,	<i>Milltown, Ind.</i>
Wilbur Pardon Bowen, <i>a</i> ,	<i>Ypsilanti.</i>
Aloysius Bradley,	<i>Atchison, Kan.</i>
John Johnson Brewer, <i>a</i> ,	<i>Romeo.</i>
Mary Ellen Britten,	<i>Lexington, Ky.</i>
Stratton Duluth Brooks, A.B.,	<i>Adrian.</i>

Archibald Brown, <i>a</i> ,	<i>Pontiac.</i>
George Clement Brown, A.B., <i>Northern Indiana University, I,</i>	<i>Dennison.</i>
Ralph M. Brown,	<i>Troy, O.</i>
Roy Wilcox Brown, <i>e</i> ,	<i>Geneseo, Ill.</i>
Thomas Lafayette Brunk, B.S., <i>Cornell Univ.,</i>	<i>Chicago, Ill.</i>
Milton G. Bryant, <i>I,</i>	<i>Hudson.</i>
Benjamin Franklin Buck, A.B.,	<i>Austin, Ill.</i>
Fanny Burnham,	<i>Saginaw, East Side.</i>
Maude Burrows,	<i>Detroit.</i>
Joseph Wallace Busch, <i>e</i> ,	<i>Marquette.</i>
Orma Fitch Butler, <i>a</i> ,	<i>Ann Arbor.</i>
Francis Elmore Cady,	<i>Chicago, Ill.</i>
Walter Briggs Cady, Ph.C., <i>p</i> ,	<i>Ann Arbor.</i>
Spencer Peter Carmichael, Ph.B., <i>Lafayette Coll., a</i> ,	<i>LeRoy, N. Y.</i>
William Ransom Carpenter, <i>a</i> ,	<i>Iron Mountain.</i>
Edith Marie Case,	<i>Manchester.</i>
Edward Burns Caulkins, <i>a</i> ,	<i>Detroit.</i>
Walter Marion Chandler, <i>I,</i>	<i>Dallas, Tex.</i>
Charles Glenn Church, <i>m</i> ,	<i>Marysville, O.</i>
Addie Melvina Clark,	<i>Holland.</i>
Rufus Wheelright Clark, Jr., <i>a</i> ,	<i>Detroit.</i>
Wiley H. Clifton,	<i>Aberdeen, Miss.</i>
Carolyn Belle Cline, <i>a</i> ,	<i>West Branch.</i>
Harrison Siner Colburn,	<i>Cleveland, O.</i>
Rufus Ivory Cole, B.S.,	<i>Peru, Ill.</i>
Caroline Colver, <i>m</i> ,	<i>Ann Arbor.</i>
Willis Gurdon Cook,	<i>Grand Blanc.</i>
Sarah Cornwall,	<i>South Moline, Ill.</i>
† Faust Franklin Crampton, <i>e</i> ,	<i>Monroe.</i>
John Robert Crouse, <i>a</i> ,	<i>Fostoria, O.</i>
Adah Curtiss,	<i>Owosso.</i>
Herbert Allan Dancer, B.L., <i>I,</i>	<i>Ann Arbor.</i>
Joseph Trower Davies, <i>m</i> ,	<i>Battle Creek.</i>
Charles Baker Davis, <i>e</i> ,	<i>Ann Arbor.</i>
Lawrence Bowen Davis,	<i>Indianapolis, Ind.</i>
William Bellows Decker, A.B., <i>a</i> ,	<i>Battle Creek.</i>
Oscar Conrad Diehl, Ph.G., <i>Buffalo College of Pharmacy, Ph.C., p</i> ,	<i>Buffalo, N. Y.</i>
Louise Frances Dodge, <i>a</i> ,	<i>Adrian.</i>
J. Arthur Dratz,	<i>Muskegon.</i>
James Arthur Durrent, <i>m</i> ,	<i>Dickinson, N. Dak.</i>
John Phelps Everett,	<i>Grass Lake.</i>

Phoebe Fairchild,	Owosso.
Thaddeus Loomis Farnham, <i>e</i> ,	Green Oak.
Charles Henry Farrell, <i>a</i> ,	Dexter.
Adelbert Howard Finney,	Cleveland, O.
Dora Clementine Fisher, <i>a</i> ,	Ann Arbor.
Orleana Amanda Fisher, B.L.,	Abilene, Kan.
William H. Foreman,	Petersburg, Ind.
Oliver D. Frederick, B.S., <i>West Chester Normal</i>	
<i>School, a</i> ,	West Chester, Pa.
Donald Fuller,	Detroit.
John Clark Galbraith,	Detroit.
Arthur Ernest Gale, <i>m</i> ,	Haverhill, Mass.
Julia Emma Gettemy,	Moline, Ill.
Edwin Charles Goddard, Ph.B., <i>l</i> ,	Ann Arbor.
Mary Alice Goddard, <i>a</i> ,	Ann Arbor.
Reuel Raymond Neil Gould,	Perrinton.
Frederick Dexter Green, A.B.,	Detroit.
Clarence Wilson Greene,	Iron Mountain.
Robert McKay Greenshields, <i>m</i> ,	Romeo.
Roy Mitchell Hardy, <i>a</i> ,	Waterloo, Ill.
William Page Harlow, <i>m</i> ,	Decatur.
David N. Harper, <i>l</i> ,	Milford.
Norman Follett Harriman, <i>a</i> ,	Ann Arbor.
Jerome Benjamin Harrington,	Watseka, Ill.
Archie Lee Harris, <i>e</i> ,	Orange, Mass.
John Longworth Heffernan, LL.B.,	Marquette.
Thomas Bravais Henry, <i>a</i> ,	Independence, Kan.
Alden Hicks,	Scottville, Ill.
Jessie Roberta Holderby, <i>a</i> ,	Ann Arbor.
Charles Morton Hosmer,	Maryville, Mo.
Willard Hunter Hutchings, B.L., <i>m</i> ,	Leslie.
William Eugene Hutt, <i>e</i> ,	Saint Louis, Mo.
Arthur Mastick Hyde, <i>a</i> ,	Princeton, Mo.
Fred Lewis Ingraham, LL.B.,	Azalia.
Walter Irvin,	North Manchester.
Frederick Charles Irwin, B.S.,	Grass Lake.
Lambert Lincoln Jackson, <i>a</i> ,	Ypsilanti.
Teresa Maria Johnson,	New London, Conn.
Amanda Wall Jones,	Sandstone.
Orville Kiger Jones, <i>l</i> ,	Connersville, Ind.
Charles Wolcott Kent, <i>a</i> ,	Kalamazoo.
John Clark Ketcham,	Nashville.
John David Kilpatrick, <i>a</i> ,	New Castle, Wyo.

Ann Eliza Kimball, <i>a</i> ,	<i>Detroit.</i>
Harriet Rebecca Kirby,	<i>Columbus, O.</i>
Horace Kitchel, <i>a</i> ,	<i>Coldwater.</i>
Grace Lord Lamb, <i>a</i> ,	<i>Erie, Pa.</i>
Helen Rose Lang,	<i>Indianapolis, Ind.</i>
Gottlieb Albert Lange,	<i>Dayton, O.</i>
Walter Napoleon Langell, <i>l</i> ,	<i>Saint Clair.</i>
Eugene LaRowe, A.B.,	<i>Webberville.</i>
Huron Willis Lawson, B.S., <i>Mich. Agr. Coll.</i> ,	<i>Lawton.</i>
Mary Frances Leach, B.S.,	<i>South Hadley, Mass.</i>
Frederick Augustus Leas, <i>a</i> ,	<i>Ann Arbor.</i>
Carl Hans Lebert, <i>d</i> ,	<i>Stuttgart, Germany.</i>
David M. Levy,	<i>Cincinnati, O.</i>
Peter M. Lippert,	<i>Lampasas, Tex.</i>
John Loeffler, <i>a</i> ,	<i>Chase.</i>
Herbert Norton Loomis,	<i>New Haven, Conn.</i>
William Lewis Love, <i>e</i> ,	<i>Detroit.</i>
Elwin Oscar Loveland,	<i>Palmer.</i>
Albert Lynch,	<i>Flushing.</i>
Andrew J. Lynd, <i>l</i> ,	<i>Saginaw, East Side.</i>
Lida McBride,	<i>Ludlow, Ky.</i>
Lewis Wilson McCandless, <i>a</i> ,	<i>Prescott, Ariz.</i>
George Alvin McGee,	<i>Stony Creek.</i>
Anna Thorne McLauchlan, <i>a</i> ,	<i>Chicago, Ill.</i>
Simon Samuel Mac Kenzie,	<i>Caledonia, N. Y.</i>
Wilfred Hamilton Manwarren, B.S.,	<i>Battle Creek.</i>
Jesse Krekore Marden, A.B., <i>Dartmouth Coll., m</i> ,	<i>New Boston, N. H.</i>
Fernando Wood Martin, B.S., <i>Chaddock College,</i>	
<i>Ph.D., Syracuse University,</i>	<i>Lynchburg, Va.</i>
Mason G. Martin,	<i>Carson City.</i>
Esther Hewitt Marsh, A.B., <i>Alma College,</i>	<i>Birmingham.</i>
Lida Janette Meredith,	<i>Rochester, Ind.</i>
Junius Lathrop Meriam, A.B., <i>Oberlin College,</i>	<i>Randolph, O.</i>
Mary Barbara Meyer,	<i>Saginaw, West Side.</i>
Charles W. Mickens,	<i>Crystal Falls.</i>
Frances Jane Millard, <i>h</i> ,	<i>Rochester, N. Y.</i>
Frances Winifred Miller, <i>a</i> ,	<i>Kenosha, Wis.</i>
Wade Millis, <i>l</i> ,	<i>Addison.</i>
Morris Wadsworth Montgomery, <i>a</i> ,	<i>Lansing.</i>
Stanley Dudley Montgomery,	<i>Lansing.</i>
William Raymond Morley,	<i>Datil, New Mexico.</i>
Ella Louise Morton, <i>a</i> ,	<i>Chelsea.</i>
Thomas Alvin Neal, <i>a</i> ,	<i>Ann Arbor.</i>

James Carlton Nelson, A.B., <i>Hanover Coll.</i> , A.M., <i>ibid.</i> ,	<i>Princeton.</i>
Edith Newhall,	<i>Sturgis.</i>
Horace Newhart, A.B., <i>Dartmouth College</i> , m,	<i>New Ulm, Minn.</i>
Jamcs Tainter Noble,	<i>Rice Lake, Wis.</i>
William James O'Brien, A.B., <i>Detroit College</i> , a,	<i>Detroit.</i>
Jesse Francis Orton, A.B., A.M., <i>Cornell Univ.</i> , l,	<i>Ann Arbor.</i>
Clinton Samuel Osborn, a,	<i>Grand Rapids.</i>
Ralph Hugh Page, a,	<i>Chicago, Ill.</i>
William Park,	<i>Carlton, Minn.</i>
John Leon Parker, a,	<i>Charles City, Ia.</i>
Andrew Paton,	<i>Ann Arbor.</i>
Jane Amanda Perine,	<i>Detroit.</i>
Nathan S. Potter, a,	<i>Jackson.</i>
Herbert Freeburn Prescott, a,	<i>Ann Arbor.</i>
Charles Marvin Preston, e,	<i>Detroit.</i>
Frank Paine Ramsey, Ph.G., <i>College of Pharmacy</i> <i>of Northern Indiana</i> ,	<i>Delta, O.</i>
Katherine Reed, a,	<i>Chicago, Ill.</i>
Herbert Matteson Rich, a,	<i>Middleville.</i>
William Harrison Rippey, e,	<i>Sturgis.</i>
Louise Lunsford Loving Roberts, a,	<i>Ann Arbor.</i>
Georgiana Grace Robinson,	<i>Battle Creek.</i>
Charles Leland Rooks,	<i>Salt Lake City, Utah.</i>
Curt Rosenow, a,	<i>Peoria, Ill.</i>
James Joseph Ryan,	<i>Colona, Ill.</i>
Frank Prather Sadler, A.B., l,	<i>Grove City, Ill.</i>
Andrew Jackson Sawyer, Jr., l,	<i>Ann Arbor.</i>
James Harvey Sawyer, e,	<i>Ludington.</i>
Murray Seligman Schloss, a,	<i>Detroit.</i>
Joseph Frank Schroeder,	<i>Calumet.</i>
Bruno Lyonel Schuster, a,	<i>Milwaukee, Wis.</i>
Linn Walker Searles, l,	<i>Ann Arbor.</i>
Henry Mortimer Senter, m,	<i>Houghton.</i>
Charles Simons, a,	<i>Detroit.</i>
Kate Chapman Slater, Ph.B., <i>Alma College</i> ,	<i>Monroe.</i>
Clara Lucretia Smith,	<i>Howell.</i>
Lora Avery Smith,	<i>Denver, Col.</i>
James Curtis Snook, d,	<i>Southampton, England.</i>
Chauncey Elmer Spicer,	<i>Joliet, Ill.</i>
Chilton Rupert Stearns,	<i>Ann Arbor.</i>
Karl Krenkell Stevens, a,	<i>Saginaw, East Side.</i>
Eva Stevenson, l,	<i>Ann Arbor.</i>

Joseph Bishop Stewart, <i>d</i> ,	<i>New York, N. Y.</i>
Kathrine Mitchell Stewart, <i>a</i> ,	<i>Lake Linden.</i>
George Chickering Stone, <i>a</i> ,	<i>Saginaw, West Side.</i>
Orno Dale Strong, <i>a</i> ,	<i>Tacoma, Wash.</i>
Milo Jasper Sweet, <i>a</i> ,	<i>Ann Arbor.</i>
Mary Maclean Thompson, <i>a</i> ,	<i>Pontiac.</i>
T. Letitia Thompson, <i>a</i> ,	<i>Saranac.</i>
Lillian Medora Tompkins, <i>a</i> ,	<i>Bay City.</i>
Sidney Beach Tremble, <i>a</i> ,	<i>Marshall.</i>
Dic Hector Trowbridge, <i>a</i> ,	<i>Ann Arbor.</i>
Leopold Joseph Ullman, <i>l</i> ,	<i>Cleveland, O.</i>
Sylvia Sanders Videtto, <i>a</i> ,	<i>Ann Arbor.</i>
Francis Allen Wagner,	<i>Decatur.</i>
George Wagner, Ph.C.,	<i>Lawrence, Kan.</i>
Peter Ward,	<i>Port Huron.</i>
Agnes Mary Warren, Ph.B.,	<i>Springfield, Ill.</i>
George Alfred Waterman,	<i>Storrs, Conn.</i>
William Isaac Whitaker, <i>m</i> ,	<i>Chelsea.</i>
Mary Blanche White, <i>m</i> ,	<i>Chicago, Ill.</i>
Roland Dare Whitman, <i>a</i> ,	<i>Ann Arbor.</i>
Allan Sisson Whitney, A.B.,	<i>Saginaw, East Side.</i>
Eva Amelia Wier,	<i>Mason City, Ia.</i>
Robert Dwight Wilson, <i>m</i> ,	<i>Medway, Mass.</i>
Katherine D. Wiltsie, Ph.B., <i>a</i> ,	<i>Detroit.</i>
John David Wombacher, <i>a</i> ,	<i>Peoria, Ill.</i>
Clara Wommelsdorff,	<i>Sandusky, O.</i>
Ella Wommelsdorff,	<i>Sandusky, O.</i>
Elbert Wood, A.B., <i>Olivet College, a</i> ,	<i>Saint Louis.</i>
Edna Ella Woodhams,	<i>Detroit.</i>
Thomas Robert Woodrow, <i>a</i> ,	<i>Ann Arbor.</i>
Matilda Woods,	<i>Rapid City, S. Dak.</i>
Walter Heman Woods, <i>e</i> ,	<i>Ann Arbor.</i>
John Edward Worden, <i>m</i> ,	<i>Tacoma, Wash.</i>
Harvey Yeaman, <i>l</i> ,	<i>Henderson, Ky.</i>
Elizabeth Zahner, <i>a</i> ,	<i>Saginaw, East Side.</i>

Summary of Students.

DEPARTMENT OF LITERATURE, SCIENCE, AND THE ARTS.

Holders of Fellowships	2
Resident Graduates	74
*Candidates for an Advanced Degree, enrolled in other departments	5
Graduates Studying <i>in Absentia</i>	5
Undergraduates:	
Candidates for a Degree	996
Students not Candidates for a Degree	187—1269

DEPARTMENT OF ENGINEERING.

Resident Graduates	5
Graduates Studying <i>in Absentia</i>	3
Undergraduates	276— 284

DEPARTMENT OF MEDICINE AND SURGERY.

Resident Graduates	6
Fourth Year Students	71
Third Year Students	93
Second Year Students	138
First Year Students	140

*Students enrolled in the Department of Literature, Science, and the Arts:

Third Year Student in Medicine	1
Second Year Students in Medicine	11
First Year Students in Medicine	12

*Students enrolled in the School of Pharmacy:

First Year Students in Medicine	2
---	---

*Students enrolled in the College of Dental Surgery:

Third Year Student in Medicine	1
Second Year Students in Medicine	2— 477

*Included in the Summary by States only in the departments in which they are enrolled.

DEPARTMENT OF LAW.

Resident Graduates	11
Third Year Students	51
Second Year Students	200
First Year Students	294
Special Students	19
*Students enrolled in the Department of Literature, Science, and the Arts	9— 584

SCHOOL OF PHARMACY.

Resident Graduates	7
Undergraduates:	
Candidates for a Degree	63
Students not Candidates for a Degree	2— 72

HOMŒOPATHIC MEDICAL COLLEGE.

Resident Graduates	3
Fourth Year Students	5
Third Year Students	8
Second Year Students	10
First Year Students	21— 47

COLLEGE OF DENTAL SURGERY.

Seniors	59
Juniors	56
Freshmen	82
*Student enrolled in the Department of Literature, Science, and the Arts	1— 198

2931

Deduct for names counted more than once . 53

Total, exclusive of Summer Schools . 2878

SUMMER SCHOOLS OF 1896.

In Department of Literature, Science, and the Arts .	199
In Department of Law	25— 224
†Deduct for students enrolled in 1896-7 in some de- partment of the University	127— 97
Grand total	2975

* See foot note on page 329.

† Not included in the Summary by States,

SUMMARY BY STATES AND BY DEPARTMENTS.

	Lit. Dept.	Engineering	Med. and Surg.	Law	Pharmacy	Homeopathic	Dental	Summer Schools	Total
Michigan	867	193	231	217	38	29	123	49	*1747
Illinois	142	39	26	73	7	1	7	12	†307
Ohio	55	13	38	49	11	6	17	10	199
Indiana	32	4	17	35	1	1	8	5	†103
Iowa	41	2	15	16	3	1	3	1	82
New York	25	7	19	8	4	2	4	1	70
Pennsylvania	19	1	18	28	—	2	1	—	†69
Missouri	17	2	3	14	1	—	1	1	39
Wisconsin	7	1	9	10	1	—	4	1	33
Massachusetts	3	1	14	6	1	1	3	1	30
Kansas	5	1	1	14	—	—	—	3	24
California	4	—	2	13	—	—	4	—	23
Kentucky	7	—	2	12	—	—	—	2	23
Minnesota	5	3	6	2	1	—	1	1	19
Colorado	5	2	2	7	—	—	—	1	17
Utah	3	—	—	12	—	—	1	1	17
Montana	3	—	2	6	1	—	1	—	13
Nebraska	—	3	2	6	—	2	—	—	13
Washington	1	1	1	6	1	—	1	—	11
Maine	1	1	3	1	—	—	2	—	8
New Hampshire	4	—	3	1	—	—	—	—	8
Oregon	1	—	2	5	—	—	—	—	8
North Dakota	—	—	3	3	—	—	1	—	7
South Dakota	2	—	—	4	—	—	—	1	7
Texas	1	1	—	4	—	—	—	1	7
West Virginia	1	1	1	3	1	—	—	—	7
Connecticut	—	—	3	—	—	—	—	3	6
Rhode Island	—	—	2	1	1	—	2	—	6
Tennessee	2	—	2	1	—	—	—	—	5
Vermont	1	1	—	3	—	—	—	—	5
Wyoming	2	1	—	2	—	—	—	—	5
New Jersey	1	—	3	—	—	—	—	—	4
Virginia	—	—	2	1	—	—	—	1	4
Arkansas	1	—	—	2	—	—	—	—	3
Mississippi	1	1	—	—	—	—	—	1	3
District of Columbia	1	1	—	—	—	—	—	—	2
Georgia	—	—	2	—	—	—	—	—	2
New Mexico	—	—	—	1	—	—	—	1	2
Oklahoma	—	—	1	1	—	—	—	—	2
South Carolina	—	—	1	1	—	—	—	—	2
Alabama	1	—	—	—	—	—	—	—	1
Arizona	1	—	—	—	—	—	—	—	1
Delaware	—	1	—	—	—	—	—	—	1

* Deduct six for names counted twice.

† Deduct one for name counted twice.

Florida	—	—	—	1	—	—	—	—	1
Indian Territory	—	—	—	1	—	—	—	—	1
Louisiana	—	1	—	—	—	—	—	—	1
North Carolina	—	—	1	—	—	—	—	—	1
Ontario	—	—	6	2	—	—	8	—	16
Province of Quebec	—	—	—	—	—	1	2	—	3
China	1	—	1	—	—	—	—	—	2
England	—	—	—	—	—	—	2	—	2
Japan	1	1	—	—	—	—	—	—	2
Barbadoes	—	—	1	—	—	—	—	—	1
Belgium	—	—	—	—	—	1	—	—	1
British Columbia	—	—	—	1	—	—	—	—	1
Bulgaria	—	1	—	—	—	—	—	—	1
Germany	—	—	—	—	—	—	1	—	1
Hawaiian Islands	—	—	—	1	—	—	—	—	1
New Brunswick	—	—	—	1	—	—	—	—	1
Norway	—	—	1	—	—	—	—	—	1
Russia	—	—	1	—	—	—	—	—	1
Sweden	—	—	1	—	—	—	—	—	1
Total	1264	284	448	575	72	47	197	97	*2984

* Deduct nine for names counted twice.

Officers of University Alumni Associations.

FOR THE YEAR 1896-97.

DEPARTMENT OF LITERATURE, SCIENCE, AND THE ARTS.

President	WILLIAM J. COCKER	'69	<i>Adrian.</i>
Vice-President	CLAUDIUS B. GRANT	'59	<i>Lansing.</i>
Secretary	LOUIS P. JOCELYN	'87	<i>Ann Arbor.</i>
Treasurer	JAMES M. CROSBY	'91	<i>Grand Rapids.</i>
Director	VICTOR H. LANE	'74	<i>Adrian.</i>
Director	JOHN D. HIBBARD	'87	<i>Chicago, Ill.</i>
Director	WALTER S. PERRY	'61	<i>Ann Arbor.</i>
Director	JOSEPH R. McLAUGHLIN	'77	<i>Detroit.</i>
Director	HENRY R. PATTENGILL	'74	<i>Lansing.</i>
Director	JOHN O. REED	'85	<i>Ann Arbor.</i>
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General Index.

- Academic Year, 6.
 Acoustics, Instruction in, 80, 135, 136, 188.
 Adams-Jewett Collection, 25.
 Admiralty Law, Instruction in, 172.
 Admission Conditions, Rules concerning, 110, 148, 195.
 Admission, Requirements for:
 In College of Dental Surgery, 205.
 In Department of Engineering, 120.
 In Department of Law, 161.
 In Department of Literature, Science, and the Arts, 34.
 In Department of Medicine and Surgery, 147.
 In Graduate School, 114.
 In Homœopathic Medical College, 194.
 In School of Pharmacy, 180.
 Advanced Standing, Admission to, 45, 123, 49, 66, 182, 195, 207.
 Algebra, Instruction in, 79, 126, 135, 220.
 Algebra, Requirement for Admission, 41, 121, 148, 165, 181, 195, 266.
 Alumni Associations, Officers of, 333.
 Alumni Day, 6.
 Ames Herbarium, 25.
 Analytic Geometry, Instruction in, 79, 80, 126, 135, 220.
 Anatomical Laboratory, 155, 202.
 Anatomical Museum, 155, 201.
 Anatomy, Instruction in, 91, 95, 96, 149, 155, 198, 199, 208, 209.
 Anglo Saxon, Instruction in, 66, 67, 219.
 Announcements for 1897-98, 6.
 Annual Fee, 36.
 Arabic, Instruction in, 60.
 Archaeological Collection, 26.
 Archæology, Instruction in, 57.
 Arithmetic, Requirement for Admission, 148, 80, 195, 206.
 Art Collection, 26.
 Assaying, Instruction in, 84.
 Assyrian, Instruction in, 60.
 Astronomy, Instruction in, 88, 137.
 Astronomy, Requirement for Admission, 122, 123.
 Athletic Association, 33.
 Athletics, Supervision of, 33, 334.
 Autopsies, 150.
 Bachelor of Arts, Degree of, 21, 103.
 Bachelor of Laws, Degree of, 21, 173.
 Bachelor of Letters, Degree of, 21, 105.
 Bachelor of Philosophy, Degree of, 21, 103.
 Bachelor of Science, Degree of, 21, 104, 142, 180, 181, 191.
 Bacteriology, Instruction in, 87, 149, 150, 154, 187, 198, 199, 208, 222.
 Bagley Collection of Medallions, 26.
 Baldwin Lectures, 31.
 Beal-Steere Collections, 24, 25, 26.
 Bibliography, Instruction in, 78.
 Biology, Degree in, 104.
 Biology, Instruction in, 91, 92, 93, 94, 221.
 Board, Cost of, 37.
 Board of Control of Athletics, 33, 335.
 Board of Regents, 8, 21.
 Botanical Collection, 24.
 Botanical Laboratory, 29.
 Botany, Instruction in, 91, 184, 222.
 Botany, Requirement for Admission, 41, 43, 14, 123, 148, 181, 195, 206.
 Buhl Bequest, 22.
 Buhl Law Library, 174.
 Burton Scholarship, 109.
 Calculus, Instruction in, 79, 80, 126, 135, 220.
 Certificates of Attendance, 173.
 Chemical Laboratories, 28, 156, 202.
 Chemistry, Degree in, 104.
 Chemistry, Instruction in, 82, 84, 126, 136, 149, 150, 154, 156, 185, 186, 198, 199, 208, 209, 210, 222.
 Chemistry, Museum of, 25.
 Chemistry, Requirement for Admission, 43, 44, 122, 123.
 Chicago Alumni Medal, 34.
 Chinese Exhibit, 25.
 Choral Union, 35.
 Christian Association, 31.
 Churches in Ann Arbor, 31.
 Civil Authorities, Relation of Students to, 35.
 Civil Engineer, Degree of, 21, 145.
 Civil Engineering, 98, 124, 139, 143, 222.
 Civil Government, Requirement for Admission, 43, 123, 165.
 Class Day, 6.
 Classical Fellowships, 108, 109.
 Class of 1894 Scholarship, 109.
 Clinical Instruction, 151, 152, 160, 202.
 Clubs, Boarding, 37.
 College of Dental Surgery, 205, 317.
 Combined Literary and Law Studies, 101, 175.
 Combined Literary and Medical Studies, 99, 152, 196.
 Commencement, 6.
 Constitutional History, Instruction in, 70, 71, 72, 172, 174.

- Constitutional Law, Instruction in, 71, 168, 172.
 Copyright Law, Instruction in, 172.
 Courses of Instruction, 53, 115, 133, 149, 153, 167, 172, 177, 183, 189, 196, 207, 212, 218.
 Coyl Bequest, 22.
 Credit System, Graduation on, 102, 191.
 Crystallography, Instruction in, 188.
 Custer Collection, 24.
 Debating League, 31.
 Degrees Conferred in 1896, 223.
 Degrees, Higher, 116, 145, 173, 175, 212.
 Degrees, Requirements for:
 In College of Dental Surgery, 211, 212.
 In Department of Engineering, 142.
 In Department of Law, 173.
 In Department of Literature, Science, and the Arts, 102.
 In Department of Medicine and Surgery, 153.
 In Graduate School, 116.
 In Homœopathic Medical College, 201.
 In School of Pharmacy, 191.
 Degrees, Rules concerning, 117.
 Demonstration Courses, 162, 198.
 Dental Laboratory, 213.
 Dental Library, 22, 213.
 Dental Museum, 213.
 Dental Surgery, College of, 205, 317.
 Dentistry, Instruction in, 208, 209, 210, 211.
 Department of Engineering, 119, 272.
 Department of Law, 163, 295.
 Department of Literature, Science, and the Arts, 38, 236.
 Department of Medicine and Surgery, 147, 281.
 De Pue Collection, 26.
 Dermatology, Instruction in, 151.
 Descriptive Geometry, Instruction in, 92, 138.
 Detroit High School Scholarships, 108.
 Diploma, Admission on, 48, 126, 148, 164, 165, 180, 194, 205.
 Diploma Fee, 37.
 Diploma Schools, List of, 50, 123.
 Discipline, 35, 112.
 Dispensary Instruction, 152.
 Doctor of Dental Science, Degree of, 21, 213.
 Doctor of Dental Surgery, Degree of, 21, 211.
 Doctor of Medicine, Degree of, 21, 153, 201.
 Doctor of Philosophy, Degree of, 21, 116.
 Doctor of Science, Degree of, 21, 116.
 Dorsch Library, 21.
 Drawing, Instruction in, 97, 126, 127, 137, 222.
 Election of Studies, Rules concerning, 110.
 Electrical Engineer, Degree of, 21, 145.
 Electrical Engineering, 98, 130, 141, 144.
 Electricity, Instruction in, 81, 82, 135, 136, 141, 142, 188.
 Electrochemistry, Instruction in, 82, 136.
 Electrotherapeutical Laboratory, 156.
 Electrotherapeutics, 151, 154, 156.
 Elisha Jones Classical Fellowship, 108.
 Elocution, Instruction in, 68, 171.
 Embryological Laboratory, 156.
 Embryology, Instruction in, 94, 150, 157, 199.
 Engineering, Civil, 98, 128, 139, 143, 222.
 Engineering Department, 119, 272.
 Engineering, Electrical, 98, 130, 141, 144.
 Engineering, Marine, 98, 130, 142.
 Engineering, Mechanical, 98, 140, 143, 222.
 Engineering, Mining, 98, 142.
 Engineering Laboratory, 131.
 Engineering Society, 133.
 English Language and Literature, Instruction in, 65, 126, 134, 219.
 English, Requirement for Admission, 39, 43, 44, 121, 123, 147, 165, 180, 195, 205.
 Ethics, Instruction in, 73, 74.
 Ethnological Collection, 26.
 Examinations for Admission, Places and Times of:
 In College of Dental Surgery, 6, 206.
 In Department of Engineering, 6, 125.
 In Department of Law, 6, 167.
 In Department of Literature, Science, and the Arts, 6, 47.
 In Department of Medicine and Surgery, 6, 148.
 In Homœopathic Medical College, 6, 191.
 In School of Pharmacy, 6, 183.
 Examinations, Rules concerning, 112, 131, 152, 169, 188, 200, 211.
 Expenses, 36, 113, 118, 145, 162, 176, 178, 193, 203, 213, 214, 215, 218.
 Faculties, Members of, 9.
 Faculty of College of Dental Surgery, 317.
 Faculty of Department of Engineering, 272.
 Faculty of Department of Law, 295.
 Faculty of Department of Literature, Science, and the Arts, 236.
 Faculty of Department of Medicine and Surgery, 281.
 Faculty of Homœopathic Medical College, 314.
 Faculty of School of Pharmacy, 311.
 Fees—See Expenses.
 Fellowships, 108, 192.
 Foley Guild, 32.
 Ford-Messer Bequest, 22.
 Forge Shop and Forging, 130, 132, 138.
 Foundry, 130, 132, 138.
 French, Instruction in, 60, 126, 134, 219.
 French, Requirement for Admission, 43, 44, 45, 122, 123.
 Frieze Memorial Organ, 35.
 Garrigues Collection, 25.
 General Library, 21.
 Geodesy, Instruction in, 139.
 Geological Collection, 23.
 Geological Laboratory, 29.

- Geology, Instruction in, 90.
 Geology, Requirement for Admission, 122.
 Geometry, Instruction in, 79, 98, 126, 135, 138, 220, 222.
 Geometry, Requirement for Admission, 41, 121, 148, 165, 181, 194, 206.
 German, Instruction in, 63, 126, 134, 219.
 German, Requirement for Admission, 43, 44, 45, 122, 123, 181.
 Goethe Library, 21.
 Gothic, Instruction in, 65.
 Graduate Courses:
 In College of Dental Surgery, 212.
 In Department of Engineering, 145.
 In Department of Law, 166, 172.
 In Department of Literature, Science, and the Arts—See Graduate School.
 In Department of Medicine and Surgery, 153.
 In Homeopathic Medical College, 201.
 Graduate School, 38, 114.
 Graduates of 1836, 223.
 Graduation, Requirements for—See Degrees.
 Grand Rapids High School Scholarships, 109.
 Graphics, Instruction in, 128, 139, 140, 222.
 Greek, Instruction in, 54, 59, 219.
 Greek, Requirement for Admission, 42.
 Gymnasium, 32.
 Gynæcology, Instruction in, 151, 197, 199, 200.
 Hagerman Collection of Books on History and Political Science, 21.
 Harrington Collection, 25.
 Harris Hall, 31.
 Harrison Scholarships, 109.
 Heat, Instruction in, 81, 136.
 Hebrew, Instruction in, 59.
 Hellenistic Greek, Instruction in, 59.
 Herbaria, 24, 25.
 Histological Laboratory, 156, 202.
 Histology, Instruction in, 91, 95, 150, 151, 154, 156, 199, 200, 208, 209, 210, 222.
 Historical Collection, 26.
 History, Instruction in, 70, 220.
 History, Requirement for Admission, 41, 43, 44, 122, 123, 148, 165, 195, 206.
 Hobart Guild, 31.
 Homeopathic Hospital, 31, 2'2.
 Homeopathic Medical College, 194, 314.
 Hospitals, 31, 160, 202.
 Houghton Herbarium, 25.
 Hydraulics, Instruction in, 128, 140.
 Hygiene, Instruction in, 87, 88, 150, 154, 159, 199.
 Hygienic Laboratory, 159, 202.
 Inland League, 32.
 Instruction, Courses of, 53, 115, 133, 149, 153, 167, 172, 177, 183, 189, 196, 207, 212, 218.
 International Law, Instruction in, 78, 169, 172.
 Italian, Instruction in, 62.
 Laboratories, 27, 131, 156, 157, 201, 213.
 Laboratory Expenses, 36, 145, 162, 193, 204, 215.
 Laryngology, Instruction in, 151, 197, 201.
 Latin, Instruction in, 55, 219.
 Latin, Requirement for Admission, 42, 43, 45, 122, 123, 148, 181, 195, 206.
 Law Courses in Summer School, 177.
 Law, Department of, 163, 295.
 Law, Instruction in, 167, 177.
 Law Library, 22, 173.
 Lecture Association, 35.
 Lectures on Special Subjects, 152.
 Lederer Collection, 23.
 Lewis Collection of Paintings and Statuary, 27.
 Libraries, 21, 160, 172, 192, 202, 213.
 Literary Department, 38, 236.
 Lithology, Instruction in, 90.
 Logic, Instruction in, 73, 74.
 Loud Lectureship, 31.
 Machine Shop, 132.
 Machinery and Mill Work, Instruction in, 128, 129, 140, 141.
 Magnetism, Instruction in, 81, 135, 136, 188.
 Marine Engineering, Instruction in, 98, 130, 142.
 Master of Arts, Degree of, 21, 116, 175.
 Master of Laws, Degree of, 21, 172, 173.
 Master of Letters, Degree of, 21, 116, 175.
 Master of Philosophy, Degree of, 21, 116, 175.
 Master of Science, Degree of, 21, 116, 144, 175.
 Materia Medica, Instruction in, 151, 184, 196, 199, 200, 210.
 Materia Medica, Museum of, 155, 201.
 Mathematics, Instruction in, 79, 126, 134, 220.
 Mathematics, Requirement for admission, 41, 43, 44, 121, 123, 143, 165, 180, 195, 206.
 Matriculation Fee, 36.
 McMillan Hall, 31.
 McMillan Shakespeare Library, 21.
 Mechanical Engineer, Degree of, 21, 145.
 Mechanical Engineering, 98, 140, 143, 222.
 Mechanical Laboratory, 131.
 Mechanics, Instruction in, 79, 80, 126, 135, 136, 188, 220.
 Mechanism, Instruction in, 140.
 Medical Jurisprudence, 151.
 Medical Library, 22, 160.
 Medicine and Surgery, Department of, 147, 281.
 Mental Diseases, 198, 200.
 Metallurgy, Instruction in, 87, 126, 130, 137.
 Mineralogical Collection, 23.
 Mineralogy, Instruction in, 89, 137, 188.
 Mining Engineering, 98, 142.
 Mining Law, Instruction in, 172.
 Museums, 23, 155, 160, 201, 213.
 Music, Instruction in, 69.
 Musical Society, 35.

- Natural History, Museum of, 23, 160.
 Naval Architecture, Instruction in, 130, 142.
 Nervous Diseases, 151, 161.
 Newberry Hall, 31.
 Non-resident Lecturers, 14.
 Non-resident Students, 116, 145.
 Northern Oratorical League, 33.
 Nurses, Training Schools for, 161, 203.
 Observatory, Astronomical, 22.
 Obstetrics, Instruction in, 151, 161, 197, 200.
 Ophthalmology, Instruction in, 151, 197, 200.
 Optics, Instruction in, 80, 81, 135, 136, 188.
 Oratorical Associations, 31, 34.
 Oratory, Instruction in, 68, 171.
 Organic Chemistry, Instruction in, 84, 186, 221.
 Organization of the University, 20.
 Osteology, Instruction in, 96, 149, 198, 208.
 Otology, Instruction in, 151, 198, 200.
 Pædology, Instruction in, 197, 200.
 Palæontology, Instruction in, 90, 91.
 Parsons Library, 21.
 Patent Law, Instruction in, 172.
 Pathological Laboratory, 157.
 Pathology, Instruction in, 151, 154, 157, 200, 210.
 Patterson Collection, 24.
 Peck Testimonials, 33, 34.
 Pedagogy—See Teaching.
 Pharmaceutical Chemist, Degree of, 21, 180, 191.
 Pharmacognosy, Instruction in, 181.
 Pharmacognosy, Museum of, 25.
 Pharmacological Laboratory, 157.
 Pharmacology, Instruction in, 151, 157, 181, 187, 194.
 Pharmacy, Instruction in, 184, 196, 199.
 Pharmacy, School of, 179, 311.
 Phillips Scholarships, 109.
 Philosophy, Instruction in, 72, 220.
 Physical Geography, Instruction in, 91.
 Physical Geography, Requirement for Admission, 122, 123, 206.
 Physical Laboratory, 27, 80, 81, 135.
 Physics, Instruction in, 80, 126, 135, 150, 185, 188, 199, 221.
 Physics, Requirement for Admission, 41, 43, 44, 121, 123, 148, 181, 195, 206.
 Physiological Chemistry, Instruction in, 87, 190, 187, 199, 222.
 Physiological Laboratory, 156.
 Physiology, Instruction in, 96, 150, 154, 156, 187, 199, 208.
 Physiology, Requirement for Admission, 122, 206.
 Political Economy, Instruction in, 76, 220.
 Political Science, Instruction in, 174.
 Practice Court, 169.
 Prime Movers, Instruction in, 128, 141.
 Professional Study in Literary Department, 98, 152, 174, 175.
 Psychological Laboratory, 30.
 Psychology, Instruction in, 73, 74, 75.
 Quaternions, Instruction in, 80.
 Railroad Engineering, 127.
 Regents, Board of, 8, 21.
 Religious Culture, Aids to, 31.
 Revell Testimonials, 34.
 Rhetoric, Instruction in, 65, 134, 219.
 Rhetoric, Requirement for Admission, 39, 121, 165.
 Richards Collection of Coins, 26.
 Rogers Gallery, 26.
 Roman Law, Instruction in, 57, 172.
 Rominger Collection, 23.
 Rules and Regulations, 110, 116, 217.
 Sager Herbarium, 25.
 Saginaw High School Scholarships, 108.
 Sanskrit, Instruction in, 54.
 Scandinavian, Instruction in, 65.
 Schedule of Studies:
 In College of Dental Surgery, 208.
 In Department of Engineering, 136.
 In Department of Law, 167, 172, 177.
 In Department of Literature, Science, and the Arts, 50.
 In Department of Medicine and Surgery, 149, 153.
 In Homœopathic Medical College, 198.
 In School of Pharmacy, 183, 189.
 In Summer Schools, 177, 218.
 Scholarships, 108.
 School of Pharmacy, 179, 311.
 Semitic Languages, Instruction in, 59.
 Senate, University, 21.
 Shakespeare Library, 21.
 Shop Practice, 129, 138, 145.
 Six-Year Course in Literary and Medical Studies, 100, 152, 196.
 Slocum Lectureship, 31.
 Smithsonian Deposits, 23, 26.
 Societies, 33, 35, 133.
 Sociology, Instruction in, 76.
 Spanish, Instruction in, 62.
 Special Students:
 In Department of Engineering, 125.
 In Department of Law, 166.
 In Department of Literature, Science, and the Arts, 46.
 In School of Pharmacy, 182.
 Steam Engine, Instruction in Principles of, 129, 140, 141.
 Stearns Fellowship in Pharmacy, 192.
 Steere Collections, 24, 25.
 Stereotomy, Instruction in, 98, 138, 222.
 Strength and Resistance of Materials, Instruction in, 126, 128, 139, 140.
 Structures, Theory of, 128.
 Students, Catalogue of:
 In College of Surgery, 317.
 In Department of Engineering, 273.
 In Department of Law, 296.
 In Department of Literature, Science, and the Arts, 238.
 In Department of Medicine and Surgery, 282.

- In Homœopathic Medical College, 314.
 In School of Pharmacy, 311.
 In Summer Schools, 323.
 Students' Athletic Association, 33.
 Students' Christian Association, 31.
 Students' Lecture Association, 35.
 Students' Oratorical Association, 34.
 Students not Candidates for a Degree,
 Admission of, 46, 125, 166, 182.
 Summary by States, 331.
 Summary of Students, 329.
 Summer Schools, 177, 217, 323.
 Surgery, Instruction in, 150, 151, 196, 199,
 200, 209, 210.
 Surveying, Instruction in, 98, 127, 139.
 Syphilology, Instruction in, 151.
 Tappan Presbyterian Association, 31.
 Teachers' Certificate, 107.
 Teachers' Diploma, 75, 107.
 Teaching, Science and Art of, 75, 107.
 Theory and Practice of Medicine, 197,
 199, 200.
 Therapeutics, Instruction in, 150, 151, 196,
 197, 198, 199, 200.
 Thermodynamics, Instruction in, 129,
 140.
 Theses, Rules relating to, 117, 173.
 Topography, Instruction in, 127, 139.
 Toxicology, Instruction in, 172, 187.
 Training Schools for Nurses, 161, 203.
 Trigonometry, Instruction in, 79, 80, 126,
 135, 220.
 Trigonometry, Requirement for Admis-
 sion, 120, 121.
 Unity Club, 31.
 University Hospital, 31, 160, 202.
 University Musical Society, 35.
 University Senate, 21.
 University System, Graduation on, 105.
 Vespers, 31.
 Waterman Gymnasium, 32.
 Wesleyan Guild, 31.
 White Collection of Medallions, 26.
 White Geological Collection, 23.
 Women, Admission of, 20, 147, 152, 194,
 198.
 Women's Building, 32.
 Woodwork, Instruction in, 129, 132, 138.
 Zoological Collection, 24.
 Zoological Laboratory, 30.
 Zoology, Instruction in, 93, 221.
 Zoology, Requirement for Admission, 122,
 148, 195, 206.

